The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

Vol. VI. No. 6. 25c per copy | Springfield, Ill., November, 1904. | Subscription $3.00 a Year.

PRACTICAL POINTS IN ABDOMINAL SURGERY—PERITONITIS.*

BY BAYARD HOLMES, B. S., M. D., CHICAGO.

Professor of Surgery in the College of Physicians and Surgeons, Medical Department of the University of Illinois etc.

When my old colleague, Doctor Bridge, invited me to speak upon Practical Points in Abdominal Surgery, and described to me the character of this audience, I remembered the experience which I have had in endeavoring to give my radical and technical ideas to an audience of relative strangers. This topic, however, is one that permits such a variety of opportunities, that I hope to be able to interest a larger number and possibly give something of value to a few.

In the remarkable craze for abdominal surgery which has raged through the country during the past ten years the physician has generally overlooked the importance of an absolute and exclusive diagnosis. The technique of operative procedures has overshadowed the importance of clinical observation and diagnostic acumen. The first and the essential point in abdominal surgery to which I would call attention is the necessity of an accurate, a careful, a conscientious, a complete and an exclusive diagnosis. It is easy enough for any veterinary to spay a pig, but the combined knowledge, wisdom, argument and practice of the most highly educated and conscientious body of men of three continents has not yet been able to accurately set down the indications for this operation in gynecology. The merest tyro can remove an appendix, drain a gall-bladder or make an intestinal resection, but our most highly educated, our most thoroughly trained and our most extensively experienced physicians are unable to agree upon the time at which these operations should be done, and in any particular case they are unable to prescribe an operation before the ravages of the disease has made the operation ineffective or risky. The technique of abdominal surgery has been so far perfected that it now awaits only an equal advance in surgical diagnosis in order to place it among the exact sciences.

The public at large and the practicing physician are interested in the symptoms, probabilities and treatment of the most common and the most threatening conditions. Without any doubt appendicitis is the most common, and it is the one condition upon which there is no end of wasted words and no relief from fantastic pathologic hypothyses. At the request of your Secretary, it shall be nameless here. There are, however, threatening conditions which follow a neglected appendicitis as well as many other accidents in the abdomen, which furnishes the motive for all early operative procedures and stands before the diagnostician as an ever-present threatening spectre. It seems to me very appropriate to confine my remarks to this terrible danger alone, which unfortunately is one for which there is little or no surgical relief and toward which all conditions within the abdomen calling for surgical interference invariably trend.

PERITONITIS.

Excluding the rare possibilities of a chemic or a mechanic peritonitis, this disease is always due, in the clinical sense at least, to some form of infection. In the ordinary suppurative peritonitis, this infection is the staphylococcus, the colon bacillus, or other kindred micro-organism. In tuberculous peritonitis it is the tubercle bacillus. The course of the disease and the possibilities of recovery or spontaneous disappearance of the inflammation, depend in a measure at least upon the specific character or the acquired virulency of the infection.

Among the most prominent factors which come into the problem of a peritonitis are the physiologic relations of the peritoneum,

*Read at the Elgin Medical Society on September 12, 1904

the anatomy of this enormously distended and complicated lymph space, and the ceaseless activities of its contained viscera.

The three great serous cavities of the body are quite differently related to the sources of possible infection, and they seem to have acquired different degrees of immunity or resistance to infection. The cerebrospinal cavity, or the cerebrospinal lake, is far removed from any infection except through pathologic condition of the middle ear, the antrum, and the mastoid cells. It presents the clinical picture of the least possible amount of resistance to infection. When it has once become infected in one part, the whole cerebrospinal cavity is quickly subject to the infection, which is carried by the constant stream of cerebrospinal fluid which fills it. Only when the infection is of a low grade, or when it is self limited in its development, is there any possibility of reaction and recovery.

The pleural and pericardial cavities stand somewhat closer to the possibilities of infection, and they seem to have acquired in the process of evolution a greater resistance to infection, and possibly some immunity. It is certain that we see cases of pneumococcic pleuritis that recover spontaneously through the arrest of the progress of the infection and the absorption of the exudate. When, however, the micro-organisms which always swarm in the upper air passages are carried from the smaller bronchial tubes, which they invade in the course of bronchitis or pneumonia, through the lymph channels, and are poured out into the pleural cavity, a progressive and destructive infection follows which can be brought to an end only by adequate drainage.

The peritoneal cavity is the largest and the most closely related to possible sources of infection. It communicates directly with the external world in the female through the vagina, the uterus, and the Fallopian tubes. In both males and females it is in the closest proximity to a constant and most extensive mass of infectious material, namely, the contents of the stomach, the intestinal tract and its appendages. It is separated from this seething mass of infection by the thin intestinal wall, which is itself liable to defect as the result of external traumatism and various forms of ulceration. The appendages of the intestinal tract, especially the appendix vermiformis, the gall-bladder, and Meckel's diverticulum, are traps laid for the purpose of catching and disseminating infection. Thus, through the evolution of the peritoneal cavity great immunity to infection seems to have been acquired by the peritoneum, and various modes of arresting or localizing the infection have been taken advantage of. Were it otherwise, the existence of the present mammalian peritoneum could not be imagined.

Clinically peritonitis is a hopeless terminal disease, except when by some rare chance it is limited to a small portion of the peritoneum. The study of peritonitis is of interest to the physician far less on account of its treatment than on account of its possible prevention. The serious result of peritonitis makes the study of any feature of the peritoneum of the utmost interest. Nothing can be neglected, either in the physiology or anatomy of this largest serous cavity in the body.

The peritoneum is essentially a lymph space and a lymph channel. From every organ of the abdomen, the liver, the pancreas, the spleen, the intestinal tract, and the genito-urinary organs, streams of lymph pass in and out of their peritoneal coverings when they are in a state of hyperemia or engorgement. There is always a small quantity of serum bathing the surfaces of the abdominal viscera. It is likely that certain portions of the peritoneal surface are almost exclusively absorbent, presumably the posterior peritoneum and the coverings of the mesentery and omentum. The quantity which passes through the peritoneal cavity in a given time has been variously estimated, but in any case it is looked upon as a rich and rapid lymph circulation.

The minute anatomy of the peritoneal surfaces is relatively simple. The cells which cover the surfaces are attached edge to edge in such a way as to leave numerous stomata or mouths communicating directly with the subserous lymph channels. These stomata

are of very considerable size and have a more or less definite configuration. Below the serous layer there is a rich network of capillaries, held in a rather firm connective-tissue membrane. In the course of inflammation these blood-vessels are enormously distended, and the delicate serous and subserous tissues become hypertrophied to such a degree that they feel hard and thick like the palm of the hand. In various places beneath the serosa, especially in the mesentery and the inguinal abdominal wall, there are great chains of lymph glands, which vary from the smallest perceptible nodules to glands the size of walnuts. Each of the abdominal organs has a special system of lymphatics gathering up the lymph from the serous surface and collecting it at the hilum or at the mesentery of the organ. The course or direction of the lymph streams is of the greatest clinical interest, especially when any surgical procedure is undertaken upon a large viscus like the stomach. The peritoneum is supplied with nerves entirely from the sympathetic plexus. These nerves carry little or no painful sensations until they have undergone changes in the course of inflammation.

The extent of the peritoneal surfaces is something enormous. Every abdominal viscus and organ, including more than twenty feet of intestine and its mesentery, the omentum and the abdominal walls, is covered by this delicate serous membrane. This surface has been estimated at more than twenty-five square feet. From its very extent the gravity of peritonitis can be predicted. It is fortunate for the clinician that the peritoneum is divided by the various organs into two more or less distinct cavities, with further subdivisions into pockets or fossae, any one of which may be the site of disease, while the others remain uninfected. From a clinical standpoint there are two peritoneal cavities, the upper and the lower, the cephalic and the caudal, separated from each other by the stomach, the transverse colon, and the omentum. A certain group of primary diseases gives rise to a secondary peritonitis in the cephalic peritoneal cavity, while another and wholly distinct group of diseases gives rise to peritonitis in the caudal peritoneal cavity. This division is of great diagnostic significance, and it is the duty of the diagnostician to early determine the probability of infection in either of these cavities. Infectious cholecystitis or cholangitis, pancreatitis, gastroduodenitis, ulcer of the stomach or duodenum, or infarcts of the liver and spleen, give rise to a secondary peritonitis in the cephalic cavity, while an appendicitis, a perforating typhoid ulcer, a pyosalpinx, a rupture of the urinary bladder, or intussusception, gives rise to a peritonitis in the caudal or lower peritoneal cavity.

The embryologic development of the peritoneum and the various excursions that take place and attachments which are formed in the production of the adult peritoneal cavity are too technical to be considered here. The anatomy of the adult peritoneal cavity must, however, receive attention. If the abdominal viscera are removed, the posterior abdominal wall in the male presents the appearance semi-diagrammatically represented in Plate I. Beginning about the middle of the Plate the transversely cut caudal end of the first portion of the duodenum is seen, with the attached common duct to the right of the hepatic artery, and a short distance below this is seen the raw surface extending transversely across the abdomen, from which the stomach and transverse colon have been removed. With the attached spleen this raw surface, which represents the severed mesocolon, divides the cephalic from the caudal portion of the posterior parietal peritoneum. Below the mesocolon there are four quite distinct longitudinal divisions of the posterior peritoneal wall, making four quite distinct peritoneal valleys. These longitudinal divisions are produced by the ascending mesocolon on the right, the mesentery of the small intestine in the middle, and the descending mesocolon on the left. Each one of these valleys or fossae may become the site of peritonitis, and the other fossae remain uninfected.

1. If the liver is raised up and the left index finger is passed with its palmar surface near the right border of the gall-bladder and then gradually insinuated downward, always to the right of the common duct, it will pass upward into a fold of peritoneum

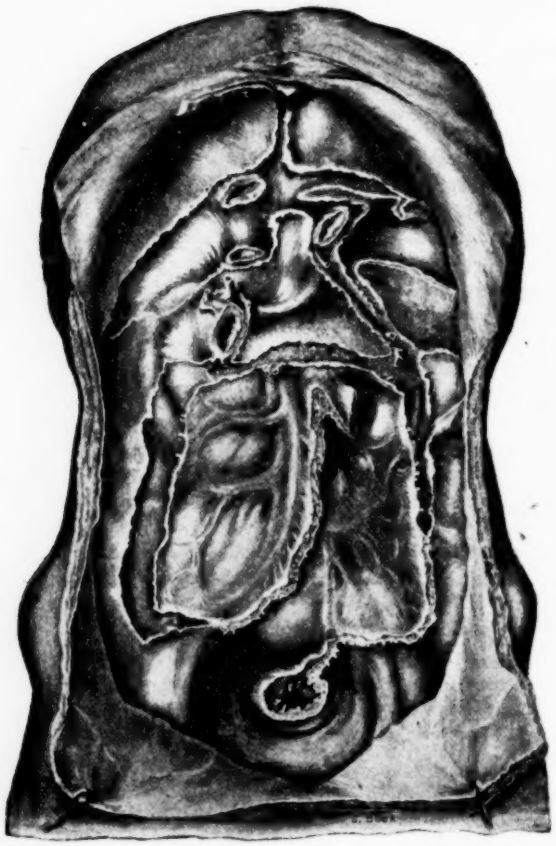


PLATE I.

This plate is intended to show the division of the dorsal wall of the peritoneal cavity into various fossae and pouches. Near the center of the plate, and just below the section of the duodenum, is seen a transverse raw surface, separating the upper, cephalic, peritoneum from the lower, caudal, peritoneum. This raw surface was produced by removing the transverse colon, under the mesentery of which the jejunum dips, showing its section in the shadow to the right of the middle line of the picture, and directly over the ileojejunal fossa. From the section of the jejunum there runs downward through the center of the picture, turning at last toward the right iliac fossa, a raw surface, in close contact with the superior mesenteric artery, and containing the cut ends of the mesenteric arterioles. This raw surface was produced by the removal of the twenty feet of ileum. It separates the right ileocolic fossa from the left. At the termination of this raw surface in the right iliac region there is a broad, raw surface extending upward, from which the cecum and ascending colon were removed. Lateralward of this denuded surface is a fossa upon which the infection from the appendix creeps and produces the subphrenic abscess, and down which the infection from a perforating ulcer of the duodenum creeps to the caudal peritoneal cavity. This fossa is bounded lateralward by the parietal peritoneum, and it opens caudally into the pelvic peritoneal cavity. In the upper right hand corner of the plate is seen the cut end of the esophagus, and to the right of this the dorsal wall of the lesser peritoneal cavity, which is bounded ventrally by the dorsal wall of the stomach, the dorsal attachment of which has been cut away, leaving a raw surface extending from the section of the esophagus caudad and toward the right of the picture through a section of the spleen to the end of the section of the mesentery of the transverse colon where it joins the descending colon. It contains the cut ends of the gastric artery above and splenic artery below. In the center of the plate, and near the bottom, is seen the cut end of the rectum, and extending upward, cephalad, and toward the right of the picture in an S-shaped course, is seen the raw surface from which the sigmoid and ascending colon have been cut away, thus dividing the peritoneal cavity again into a fourth longitudinal fossa.

Beginning at the cut end of the esophagus again, and extending toward the left of the picture, is a broad, irregular, denuded surface, from which the attachments of the liver have been removed, exposing the diaphragm and two cut ends of the interior vena cava. From this raw surface, and extending upward in the middle line, dividing the peritoneal surfaces of the diaphragm into two portions, is the raw surface produced by the section of the falciform ligament of the liver.

Thus, beginning at the top of the plate, we have five distinct pouches or fossae of peritoneum, any one of which may harbor infection, and from any one of which infection may go out into all of the other fossae: the lesser peritoneal cavity, or the retrogastric peritoneal pouch, usually infected from the dorsal wall of the stomach, the cephalic peritoneal cavity, usually infected from the gall-bladder, the common duct, the pyloric end of the stomach, or the first portion of the duodenum, the right ileocolic fossa, usually infected from the appendix; the left ileocolic fossa, rarely the site of primary infection, and the pelvic fossa, usually infected from the genitourinary tract. Lateralward of these five fossae are the right and left retrocolic fossae, the former of which is usually infected from the appendix, but sometimes from the biliary tract or the gastroduodenal region.

just large enough to contain it, and a considerable peritoneal pouch known as the lesser or little peritoneal cavity. This opening in which the finger finds itself is the foramen of Winslow, and it is a point of great surgical and anatomic interest. This foramen is shown with its anatomic relations in Plate II.

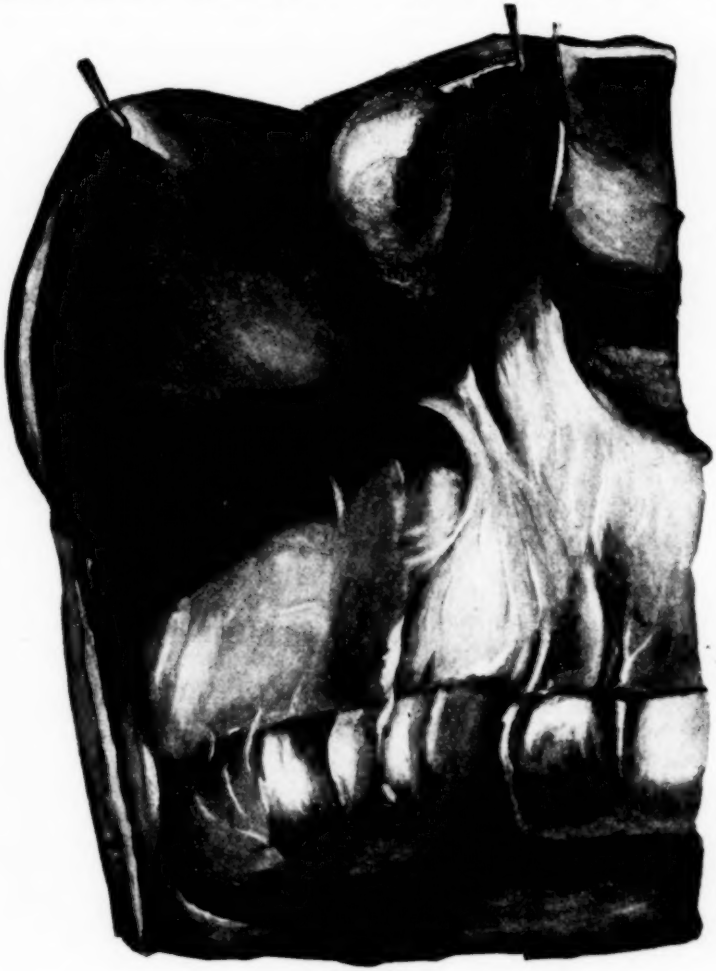


PLATE II.

The under, caudal, surface of liver and gall-bladder, showing entrance to lesser peritoneal cavity through the foramen of Winslow.

2. If the colon and omentum are raised upward and the ileum drawn toward the right so that the left index finger holds the last cephalic portion of the jejunum on its palmar surface, the opposing right index finger can be brought on the left side of the jejunum, against the pulsating superior mesenteric artery and the transverse portion of the duodenum, into the duodenojejunal fossa. This foramen is sometimes known as Treitz's foramen. It is of great surgical interest on account of the occasional occurrence of hernia into this fossa or recess. In about two-thirds of all individuals this foramen

admits the index finger and the fossa holds the thumb as far as the first joint only.

3. Behind the mesentery at the angle of junction of the ileum and cecum there is a peritoneal pouch known as the ileocecal fossa, which sometimes reaches as far upwards under the cecum as the right kidney. It is bounded upon the right by the mesentery of the appendix and cecum, and upon the left by the mesentery of the ileum, containing the ileocolic artery. It is covered above, in the ordinary position of the intestines, by the ileum, and in some subjects by the ileocecal fold. In this embryologic peritoneal pouch the vermiform appendix is often left behind and firmly attached. This pouch is often the site of periappendicular abscess which are separated from the general peritoneal cavity by adhesive peritonitis.

4. The ileocolic fossa is a superficial fold, which is found in some cases, especially when the ileocecal fossa is absent. It is fitted into the angle of the ileum and colon, and is usually too shallow to be of much clinical interest. It is bounded on the right by the ascending mesocolon and caudally by the mesentery of the ileum, and is separated from the greater ileocolic valley on the right by the ileocecal fold and the prominence given the peritoneum by the ileocolic artery.

5. The intersigmoid fossa is a fold of peritoneum which has attained great clinical significance from the fact that it frequently includes the mesocolic hernia of Cooper.

These fossae, pockets, folds, or recesses of the peritoneum are of the greatest possible clinical importance, because they are straits in which the intestine may become incarcerated and strangulated, giving rise to the symptoms of obstruction of the bowel and later to infection and general peritonitis.

The physiologic activity of the peritoneum is something marvelous to contemplate. While some of its portions, especially the diaphragmatic and posterior parietal peritoneum, seem to have greater activity than other portions, the peritoneum covering the various organs of the abdomen has been proved to be actively absorbent. Fine particles of coloring matter suspended in non-irritating fluids and rendered properly aseptic have been placed in the peritoneal cavities of animals and in an excessively short time these particles are found in the lymph tissues of the mesentery, in the lymph tissues of the capsule and substance of the liver and its hilum, and in similar structures in every abdominal organ. The diaphragmatic and mediastinal lymph tissues are most rapidly colored, and this indicates an unusual activity in the peritoneum of the rapidly moving diaphragm.

The quantity of fluid which is absorbed by the peritoneum has been carefully studied in animals, and these experiments indicate that the so-called normal saline solution to the extent of from five to eight per cent of the total weight of the body is absorbed in each hour. Watery solutions of poisonous substances injected into the peritoneal cavity are more rapidly absorbed than when taken into the intestinal tract. The effect of irritants and poisons upon the absorptive power of the peritoneum is very rapid, and with certain poisons and intoxicants the absorption ceases and the fluid or irritant remains isolated. Thus, when the irritant is first injected it is rapidly absorbed, but the peritoneum is thereby so destroyed that no further absorption takes place.

When fluids of an osmotic power different from that of the blood serum are injected into the peritoneal cavity, a most rapid exudative process is undertaken by the peritoneum. Concentrated solutions of sugar injected into the peritoneal cavity of animals have caused an exudate equal to 4.3 to 8.3 per cent of the weight of the animal during the first hour. When septic material is injected, this exudate is rapid and results in the formation of fibrinous adhesions, which limit the exudative process and cover the infected peritoneum with a sort of granulation tissue. The exudate which occurs from traumatic obstruction of the efferent blood supply of a glandular organ, a viscus, or a tumor is sometimes very rapid and enormous. The exudate also contains traces of the secreting products of the gland, the material of the tumor, or the contents of the viscus. For obvious reasons no very accurate estimate

of the quantity of fluid which may be thus transuded from the several abdominal organs has been made. No one knows when the obstruction occurs, nor how much of the transudate has been resorbed. With the transudate comes the bile pigment from the liver, or the peculiar toxic elements of an ovarian tumor, or the fecal toxines and the colon bacilli from the strangulated intestine or vermiform appendix. In any case the presence of a fluid in the peritoneal cavity is a source of danger to the patient, for it is likely to become the culture medium of any micro-organisms which might gain access to the peritoneal cavity.

The nerve supply of the peritoneum is derived from the sympathetic plexus. It is but poorly supplied with sensory fibers. The peritoneum of the intestine or other abdominal viscera can be handled gently without the production of anything but an indistinct malaise. The appendix vermiformis, the gall-bladder, or a Meckel's diverticulum may be removed under local anesthesia for the abdominal incision without producing anything like the amount of pain which a similar operation would produce upon the lip, the tongue, the tonsil, the prepuce, or even the cervix of the uterus. When, however, the peritoneum is roughly handled, the shock which results produces a remarkable fall in the intraarterial tension. Upon animals Crile has shown that the diaphragmatic peritoneum and the peritoneum of the cephalic peritoneal cavity is much more intimately connected with the production of shock than that of the caudal peritoneal cavity. The shock is diminished when the peritoneum has been very lightly cocainized. It is a frequent clinical observation that rupture of a viscus produces sudden and terrible shock.

When the peritoneal surfaces have become irritated or inflamed, they take on a very decided sensory function. The pain of a peritonitis is one of the most agonizing which can be imagined or suffered. Frequently the progress of a disease of the gall-bladder or appendix gives rise to temperature and symptoms of intoxication, but only after the peritoneum is involved does the first painful symptom appear. In some cases the gall-bladder, for instance, is filled with pus and greatly distended, rendering the peritoneal covering anemic and therefore anesthetic, so that rupture of the distended viscus takes place without pain, and the first symptom is shock, quickly followed by the pain of a general peritonitis.

If we look upon peritonitis from the standpoint of its etiology, we are concerned very promptly with the possibility of a primary or idiopathic peritonitis. From a theoretic standpoint the peritoneum, the pleural cavities, the pericardium, the serous cavity of any joint, may be the site of an inflammatory process produced by a microorganism or infection which has left no signs of its progress from its atrium in the digestive, respiratory, or cutaneous surfaces to the serous surface itself, but as a matter of fact, this theoretic possibility is not sustained by clinical observation. A pleuritis is the result of a pneumonia, an infarct of the lung, an osteomyelitis of a rib or vertebra, a ruptured mediastinal lymphadenitis, a perforating ulcer of the stomach attached to the diaphragm, or other adjoining infection. The same explanations follow the study of pericarditis, and joint infection. Grawitz found 867 cases of peritonitis in the Charity Hospital between 1876 and 1885 out of 8,421 postmortem examinations. In 13 of these he was unable to demonstrate the source of the infection in an adjoining organ, and was obliged to put them down as cases of primary peritonitis. Later observers have made a more careful study of the sources of peritonitis, and as a result Benda and Habershon were able to demonstrate the source of the disease in almost every case which came to autopsy. Primary or idiopathic peritonitis is a theoretic ghost, which has always been feared by diagnosticians, but never observed either by the pathologist or by the surgeon.

A peritonitis may be the result of traumatic irritation. In this case it is reparative and self-limited, and leaves no trace behind it except the adhesions which may result from the attachment of the inflamed peritoneum of one viscus to that of the abdominal wall or of another viscus. Such cases of traumatic peritonitis follow injuries of the

abdomen, rupture of the capsule of the liver, of the spleen, of a fibroid of the uterus, or the peritoneal covering of the uterus itself, of a distended intestine, or other abdominal organ. These injuries to the peritoneum result in local, reparative, adhesive peritonitis. This peritonitis presents all the symptoms of an infectious peritonitis except those that relate to or depend upon toxemia. The shock and pain are present, but the rise in temperature is trifling and transitory, and the leucocytosis is insignificant and rapidly receding.

Peritonitis of a chemic origin arises from the irritation of a transudate: the escape of urine, or the rupture of an ovarian tumor or pancreatic cyst or gall-bladder into the general peritoneal cavity. These rare clinical findings are quickly overshadowed by the appearance of infection in the transudate and exudate. The symptoms of the chemic peritonitis are similar to those of a traumatic peritonitis except in that the whole peritoneum is apt to be involved. The shock and pain are therefore more extensive and serious, and a certain sort of toxemia is added to the picture. This toxemia may differ in no respect from that of an infectious peritonitis except in that it is non-progressive and self-limited. The patient may, however, die of the rapid toxemia, or if she survive, the toxines of the ruptured ovarian tumor, for example, may be all eliminated and health restored. There will then be left behind only those results of the peritonitis which would follow a traumatic peritonitis involving the same viscera.

When an uninfected gall-bladder or common duct is opened into the peritoneal cavity it gives rise to a chemic peritonitis which continues as long as the irritating bile leaks through the rupture. As soon, however, as the rupture closes the escaped bile is absorbed and the exudate which covers the irritated peritoneum undergoes regenerative changes and disappears, leaving the dangerous adhesions to confound the diagnostician.

The prime and only important etiologic factor in peritonitis is the infectious micro-organism. The three important sorts of infection are:

(1) Those micro-organisms that infect the peritoneum whose ordinary habitat is the intestinal tract, namely the staphylococcus, the colon bacillus, and the streptococcus. These micro-organisms and those which accidentally accompany them as messmates or as pathologic accidents of the intestinal tract, such as the influenza bacillus, the bacillus of dysentery, or possibly the typhoid bacillus, produce the greater number of cases which we are called upon clinically to observe or treat.

(2) Those that enter the peritoneum from a septicemic condition, such as the tubercle bacillus in acute miliary tuberculosis, the pneumococcus, the gonococcus in males, and possibly occasionally in females.

(3) Those micro-organisms that come from the external or adjoining parts, not the intestinal tract, as for example the gonococcus in pyosalpinx, the tubercle bacillus in tuberculosis of the mesenteric lymph glands, or in Pott's disease of the spine, and the staphylococcus and streptococcus in cases of rupture of the urinary bladder, perinephritic abscess and perforating wounds of the abdominal wall.

The reaction of the peritoneum to infection depends almost entirely upon the character and quantity of the infection. The first effect of a peritonitis due, for instance, to the colon bacillus is the effusion of a fibrinous or serous exudate, which results in causing an agglutination between opposing peritoneal surfaces. This agglutination is more rapid when the effusion is slight and coagulable, and slow or absent when the effusion is rapid and serous. The peritoneal surfaces are at once swollen and turgid; the capillaries are greatly enlarged, and the subserous connective tissue is increased to an enormous extent. The underlying blood-vessels frequently undergo such changes in their walls that a thrombosis, at first mural and then obliterating, takes place. This thrombosis adds to the gravity of the disease, and its danger is apparent when we remember the proximity of the intestinal and mesenteric blood-vessels to the peritoneum. The

underlying muscles of the intestinal tract are paralyzed by the infiltration of their sheaths, and peristalsis stops, resulting in obstruction of the bowels. The mesenteric and other lymph tissues are engorged with serum, and afterwards with infectious material, and they sometimes become, in circumscribed peritonitis, the site of real abscesses, which may remain after the peritonitis has been relieved by surgical measures.

The rapidity and course of a peritonitis due to the tubercle bacillus is slower, while that due to the invasion of the streptococcus is more rapid; and there are doubtless grades of virulency for these two and for all other micro-organisms.

Since the peritoneal cavity is a single, open, and practically continuous space, the artificial division of peritonitis into local and general, circumscribed and diffuse, is merely a matter of pedantic convenience and not of clinical significance. It is a fact that many cases of peritonitis become in the course of time circumscribed by adhesions, but this peritonitis was at first diffuse and uncircumscribed and liable at any moment to become general. Nevertheless, it is convenient for us to say that a peritonitis is general, and from a clinical standpoint it is therefore fatal unless it be due to the tubercle bacillus. It is convenient to say in another case that a peritonitis is diffuse and occupies an unbounded and unlimited portion of the peritoneal cavity, but fails to involve it in its entirety, and it possesses the possibility of becoming circumscribed by adhesive processes. It is convenient in another case to say that the peritonitis has become circumscribed; that it occupies a definite and limited portion of the peritoneal cavity, and that the remainder of the peritoneal cavity is free from infection. With these limitations the terms are used in this discussion.

Again, the character of the effusion or absence of effusion gives the peritonitis certain appellations. If it is free from liquid effusion, it is said to be a dry peritonitis, peritonitis sicca; if it is a peritonitis in which fibrin is extruded, it is called a fibrinous peritonitis. If serum is transuded, it is called a serous peritonitis. When pus is formed from the effusion, it is called a suppurative peritonitis. The result of a peritonitis sometimes determines the appellation. When the peritonitis results in adhesions, it is called an adhesive peritonitis. When it limits the extension of the infection, it is called a limiting peritonitis. When it obliterates a peritoneal fossa or pouch, it is called an obliterating peritonitis. Most of these limitations are obvious and require no explanation or definition, but they must be understood as relative and as artificial categories into which only a small number of typical cases permit themselves to be classified.

As remarked at the beginning of this address, peritonitis is interesting to the physician and surgeon only so far as its prevention is possible or its course is limitable. The treatment of peritonitis is a short and melancholy chapter and confined entirely to the treatment of the localized or not extensively diffuse disease. The question which at once arises in the mind when symptoms of peritonitis appear is, "From what point or atrium did this peritonitis arise?"

The most obvious though one of the rarest doors through which the etiologic factor of peritonitis enters is a defect in the abdominal wall, or an opening between the gastro-intestinal tract and the general peritoneal cavity. Stab wounds, gunshot wounds, and other penetrating wounds of the abdominal wall give entrance to the pathologic micro-organisms, which set up a peritonitis. The same result follows from a ruptured or perforated intestine or other viscus. Such a defect is usually plainly indicated and perfectly obvious.

The most common source of peritonitis, especially in the male and in children, is the vermiform appendix. Probably two-thirds of all cases of peritonitis, in these subjects at least, arises from the spread of an intra-appendicular infection to the periappendicular peritoneum.

The second most common source of peritonitis is confined entirely to adult females, and is limited to the uterus and fallopian tubes. In the former the infection is usually

of a puerperal origin, while in the latter instance it is due to gonococci, with possibly a later mixed infection.

Probably the third site of a beginning peritonitis is the region of the gall-bladder and common duct. Here the peritonitis may be due to the spread of an intracystic inflammation to the pericystic peritoneum, or it may be due to infection about a stone in the common duct and the spread or discharge of the infection into the cephalic peritoneal cavity.

The other sources of peritonitis are of uncertain frequency. The stomach and duodenum are occasionally perforated by ulcers; abscesses occasionally appear in the liver and break into the peritoneal cavity; intussusception, carcinoma of the intestine, infarcts of the spleen, and other viscera give rise to peritonitis; loops of intestine become strangulated in the inguinal ring, the foramen of Winslow, the duodenojejunal fossa, the obturator foramina, or through abnormal defects in the region of the umbilicus or the diaphragm. Ulcers of a tuberculous or typhoid origin rupture into the peritoneal cavity, and suppurating lymph glands in the mesentery or abdominal wall give way. Prostatic abscesses and perirenal abscesses, or even abscesses arising from the kidneys, the vertebra, or the abdominal wall, break into the general peritoneal cavity and give rise to the terminal disease. In the course of marasmus thrombi form in the mesenteric vessels, and the tributary gut is quickly rendered necrotic and infected. In the course of endocarditis and pyemia, and especially in the course of puerperal sepsis, infected emboli may produce infarcts in any of the blood vessels tributary to the peritoneum.

The diagnostician and clinician must not confound his judgment of the probabilities in any case by the multiplicity of possible sources of peritonitis.

The clinical picture of an acute peritonitis is one with which the physician becomes mournfully familiar. It is most striking and characteristic. Even the appearance of the patient's face and the attitude of the body are enough to establish the diagnosis at the first glance of the experienced clinician. The patient is supine, fixed, immovable, and with the knees drawn up, the head and shoulders thrown forward, and the arms in an attitude of protection. The face is thin, pinched and the nose appears sharp. The eyes are sunken; the color of the skin is pale but smoky; the lips are red, and the brow is covered with a cold sweat. When the abdomen is exposed the abdominal muscles are rigid, and at first retracted, and later distended to the utmost. The respirations are wholly costal and rapid in proportion to the distention of the abdomen and the amount of shock or cyanosis. The pulse from the very first is excessively rapid, 104 to 160 to the minute; it is weak and almost imperceptible at the onset of the disease and during the persistence of shock, but later it becomes full and bounding. The temperature is often carried over from the primary source of the peritonitis, but it usually falls as soon as the peritonitis begins, and often leads to a false hope of a betterment of the condition of the patient; (the cross of the curves.) When the peritonitis is rapid, virulent, and diffuse, the temperature is often very high, especially in puerperal sepsis, reaching 104 to 106.

The voice of the patient is remarkably changed, and is at first weak and restrained, and finally becomes harsh and ringing. The mind remains clear usually to the last, or when the temperature is very high a mild and consistent delirium, with vivid illusions, prevails. Toward the end the patient has a delightful sense of well being, which betokens euthanasia. The face becomes cyanotic, the extremities cold, and the body is covered with a cold sweat.

The onset of the peritonitis is usually marked by the sudden appearance of dreadful abdominal pain. This pain is of such a nature that it is to be mistaken only for the passage of a biliary or urinary stone. It is so agonizing and terrible that the physician is tempted to at once administer morphin or an anesthetic. From that time on the pain is constant, with frequent exacerbations. The pain begins to subside only after the effusion has become considerable and the toxemia has produced an anesthesia of its own. Every effort at inspiration produces

pain, which limits the motion of the diaphragm. The patient can hardly endure the slightest touch over the abdomen, and the movements of the bed and bed-clothing produce acute distress.

With the onset of pain there appears as a rule a violent attack of vomiting. At first the contents of the stomach are discharged, then later in the course of the disease the water which the patient is constantly calling for, and bile-stained mucus are thrown up, and last of all, when the obstruction of the bowels through paralysis has become complete, the patient throws up fecal smelling vomitus or even fecal matter itself. Any time during the course of the disease the highly congested mucous membrane of the stomach exudes blood, and this gives rise to the black vomit which is so ominous to the laity. Every attack of vomiting produces an exacerbation of the abdominal pain and leaves the patient cyanotic, dyspneic, and covered with a cold sweat.

From the very beginning of the peritonitis the intestinal muscles are paralyzed, and there is complete obstipation, and even the passage of gas is arrested. No amount of enemas does more than empty the lower bowel, and every enema and every attempt at catharsis produces an increase in the pain. Even the introduction of a few ounces of fluid into the colon is followed by a reverse peristalsis, which carries the fluid upward to the site of obstruction. This event is marked by an agonizing colic, which slowly subsides.

The urine during the whole course of the disease becomes scanty and more scanty, and contains a larger and larger quantity of the normal constituents, with a very great increase in the quantity of indican, and at last a growing quantity of albumin and many granular and bloody casts. Their presence in the urine must be looked upon as one of the gravest manifestations of a localized or diffuse peritonitis.

The effusion into the peritoneal cavity comes on usually with great rapidity after the onset of the disease. Sometimes, however, the infection is so virulent that the intestines become covered quickly with a congested serosa almost like a veil of granulation tissue, and then only a small amount of bloody, stinking serum is found in the pelvis at the autopsy. The tenderness of the abdomen and the distress of the patient at every effort to palpate or percuss the abdomen makes any serious attempt to determine the amount of the exudate clinically impossible. A rectal or vaginal examination, a light palpation of the abdomen with most careful percussion of the flanks, and an auscultatory percussion, especially over the liver and stomach, is all that can be attempted. No effort should be made to determine by palpation the original site or atrium of the disease. If the absence of liver dullness gives rise to the suspicion that the abdominal cavity contains free gas, it may speak for a perforation of the intestinal tract, or for the improbable presence of gas-forming bacilli in the effusion.

The course of the disease is so short that the examination of the blood shows variation only as concerns the leucocytes. While the leucocytosis may have been very moderate, 8,000 to 12,000 to the cmm. during the course of the primary disease, the metritis, the salpingitis, the appendicitis, or the cholecystitis, or even below normal during the course of the typhoid, as soon as the peritonitis is initiated, the number of leucocytes increases with tremendous rapidity, until it reaches 30,000 to 60,000 to the cmm.

The natural tendency of infection within the peritoneal cavity, from whatever atrium it comes, is toward a rapid, diffuse, or general dissemination, until all the peritoneal surfaces are involved. There are many elements or factors which contribute toward this end, and only a few that tend to limit the spread of infection. (1) The natural capillary attraction between the peritoneal surfaces results in a rapid spread of the effused and infected lymph about, for example, a defective appendix. If the surfaces of two microscope slides are brought together and the edges touched to a drop of ink or colored fluid, the drop spreads rapidly in every direction until all of the opposing surfaces are stained. This happens upon peritoneal surfaces whenever infected lymph is poured out into the peritoneal cavity. (2) The peri-

toneal surfaces are unlike the rigid surfaces of a glass plate in this respect that they are for the most part in constant motion. The peritoneal surfaces of the intestine undergo peristaltic movements, carried on by the muscles of the gut. This movement is increased by the presence of food in the stomach, by the use of purgatives, and is diminished by the use of opiates and by the toxemia of the infection. (3) The diaphragm is in constant motion and communicates aggressive and revessive movement to every organ and viscus of the abdomen from the liver to the bladder and uterus itself. By this constant swinging of the viscera infection is spread from one surface to another. (4) The action of gravity causes an effusion to spread from a higher to a lower part of the abdominal cavity, and this influence is changed with every change in the position of the body. (5) Last of all, the extent of the effusion naturally results in the spread from one locality to another, and this factor prevails even when the limiting factors have exerted themselves to the utmost. It is hardly worth while to mention a number of other factors which result in the spread of infection, such as vomiting, the distension of the bowel above a completely paralyzed gut, the formation of capillary thrombi, the disintegration of infected effusions of lymph and fibrin, and the spread of the infection as a lymphangitis.

The factors which result in the limitation of infection are less numerous and less efficient. (1) The most important limiting factor is the production of a fibrinous, adhesive peritonitis, somewhat in advance of the infection, the result of a toxemia carried through the subperitoneal lymph channels. In some forms of peritonitis this effusion does not appear. The surfaces of the peritoneum remain covered with liquid effusion, and no tendency is shown toward adhesions between the peritoneal surfaces, while every movement of the intestine and of the body spreads the infection. Adhesive peritonitis appears only when the effusion is small or slow. The formation of adhesions requires time, and when the inflammatory process is too rapid it is not present, or it is limited to small areas of motionless peritoneum. (2) The paralysis of the bowel produced by the contact of infected effusion is a strong limiting factor in peritonitis. It is probable that this occurs quite early in the course of the disease, and that it assumes a grave form resulting in obstruction of the bowel at a somewhat later time. (3) The relatively motionless omentum is a factor which tends to limit the spread of the infection, and it specially shuts off the cephalic from the caudal peritoneal cavity. It also lies over the ileocolic fold and frequently adheres to it, shutting off the ileocolic from the ileocecal fossa. (4) The intestinal mesenteries and mesocolon are anatomic factors which limit the spread of peritonitis.

Everything which tends to diminish the activity of the factors which cause an extension of the peritonitis may be looked upon as factors limiting its spread. The pain which results secures the utmost quiet of the patient, and the rigidity of the abdominal walls, and the arrest of movements of the diaphragm somewhat lessens the activity of the bowels. The toxemia, again, lessens the discomfort of the patient and quiet follows where agitation might be expected.

In the great majority of cases the diagnosis of peritonitis is simple, prompt, and easy, but there is a series of cases in which from the prominence of one set of symptoms or the absence of another the diagnosis may be obscure, and nothing but a laparotomy or a lapse of valuable time can make the picture clear. The pain of a peritonitis may be mistaken for renal colic, for biliary colic, for lead colic, the crises of locomotor ataxia, for an acute enteritis, for ruptured ectopic pregnancy, for hysteria, for an obstruction of the bowel by hernia or intussusception, for an ovarian tumor with twisted pedicle, for acute dilatation of the stomach, for pancreatitis and fat necrosis, or for a pleuritis or a pericarditis, not to mention the traditional neuralgias of the stomach and peritoneum.

The obstruction of the bowel may be referred to volvulus, to hernia in one of the retroperitoneal pouches, such as the duodenojejunal pouch, the ileocolic pouch, the ileocecal, the retrocecal, or sigmoid pouch, or

through an artificial foramen, such as the obturator foramen, the sacrococygeal foramen, the inguinal ring, the umbilical ring, or any number of places where defects occur in the diaphragm and abdominal wall. It may be referred to an impacted fibroid or ovarian tumor, or to adhesions about the stump where such tumors have been removed, or other abdominal surgical operations have been performed. It may be looked upon as a case of intussusception in the young or carcinoma of the colon in the old. If an abdominal tumor presents itself with the obstruction, it may be looked upon as a case of fecal impaction or obstruction of the ileocecal valve with an enterolith.

The toxemia of peritonitis may be mistaken for typhoid, for uremia, for malarial or diabetic coma, for cerebrospinal meningitis, for acute miliary tuberculosis, septicemia, and pyemia.

The distention of the abdomen may be mistaken for gaseous distention due to constipation or fermentation of the intestinal contents, to sudden appearing hysteric distention, and to acute dilatation of the stomach. In patients suffering from chronic nephritis, it may be mistaken for an acute effusion, which sometimes appears as a terminal disease; or it may be looked upon as the result of embolism or thrombosis in the mesenteric vessels in typhoids or persons suffering of amebic disease or anchylostomae duodenalis, or to ascites from cirrhosis of the liver or lesions of the heart.

The treatment of a traumatic peritonitis without infection is a matter of pure symptomatic palliation. The natural tendency is toward complete recovery, or recovery with few or many anatomic defects, which may themselves require subsequent surgical treatment.

The treatment of peritonitis due to chemic irritation cannot be so simply stated. If the chemic irritation is a ruptured urinary bladder, immediate surgical repair is absolutely indicated. If it is due to a ruptured ovarian cyst, it is possible that the patient may survive, and the conditions may be such as to make expectant treatment permissible. If the peritonitis is due to a ruptured extrauterine pregnancy, the indications for a laparotomy are positive.

The treatment of a suppurative peritonitis, or an infectious peritonitis not of tuberculous origin, and presumably due to pyogenic germs, has long been a field of contention between physicians and expectant treatment on the one hand and surgeons and radical treatment on the other hand. The physicians have multiplied remedies and methods of administration, but they have failed to make possible an exclusive and absolute diagnosis of the kind and extent of the peritonitis. If I may be allowed to reduce their method of treatment to the simplest terms, I should say that it consisted in two sorts: (1) Extreme purgation by the use of remedies by the mouth or anus, and (2) its antithesis, the locking up of the bowels and the paralysis of their peristaltic motion with opium and kindred drugs.

The former method prevails among gynecologists and obstetricians, and seems to have gradually receded until it now finds its field only in such forms of peritonitis as arise from sources outside the intestinal tract, and especially from the Fallopian tubes and the uterus. Even among gynecologists it is relied upon not as in any way curative, but only designed to relieve the acute manifestation of the disease and separate by death the operable and hopeful from the inoperable and grave cases. A full argument in favor of the use of saline cathartics and accessory measures in peritonitis is given in Anders' Practice of Medicine, 6th edition, page 829.

Fearing obstruction of the bowels due to the peritonitis, large quantities of concentrated solutions of magnesium sulphate or Rochelle salts are given by the mouth, or injected into the rectum, to produce rapid liquid discharges, to keep the intestines in an active state of peristalsis, to dehydrate the peritoneal cavity, and to reduce the hyperemia of the intestines. It is perfectly clear that if this effort is successful the most active factor in the dissemination of the infection is exaggerated. If there is an infectious material in the free peritoneal cavity, it is certainly spread. If obstruction has occurred before the administration of the

purgative, it only adds to the suffering and to the danger of the patient.

On the other hand, the use of opium has been recommended by physicians, and combated by surgeons, in all cases of peritonitis arising from the intestinal tract and its appendages. The opium is given with the idea that by its use one of the most prominent symptoms, namely the pain, is relieved, and one of the greatest dangers, namely the spread of the infection through the peristaltic movements of the bowels, is diminished. The utmost quiet and composure of the patient is thus secured, and time is given for adhesive peritonitis to occur and limit the spread of the disease. Usually from one-third of a grain to a full grain of morphine is given hypodermically every two hours as long as the pain calls for it; but in some cases enormous quantities have been given, amounting to 18 to 200 grains of opium a day. Nothing can be more disastrous than the use of opium in a peritonitis, the source of which has not been definitely fixed or the extent of which has not been positively determined. From the standpoint of the surgeon opium should be used in peritonitis only to relieve pain after operation, or to promote euthanasia when operation is impossible.

The more empirical, and therefore the less scientific, the medical body, the more positive are its statements for the use of one or another therapeutic measure for peritonitis. The homeopathists have a long list of dilutions and triturations which are influential, effective, and curative in all stages of peritonitis. The osteopathists and hydropathists find unfailing methods in their several arts, and even in the regular profession the bishops and cardinals and popes of extensive practice proclaim ex cathedra unfailing methods of limiting the spread of infection and of killing the micro-organisms in peritoneal effusions, by lavage, starvation, enemas, and the poulticing of the abdomen in concentrated solutions of boric acid and alcohol. These methods are alike in their irrational basis and pernicious results. They not only kill the patient, but they promote careless diagnosis, faulty if not fallacious methods of reasoning, and calamity to the interest of patient and profession.

The surgical treatment of a diffuse, general peritonitis is a hopeless proceeding which the surgeon is obliged to undertake in order to preserve his own sanity and composure in spite of its almost invariably fatal termination. Theoretically and practically every case of general suppurative peritonitis terminates fatally. When, however, the diagnostician has made the relative diagnosis of a diffuse general suppurative peritonitis, the establishment of adequate drainage through the abdominal wall and through the vagina with the obliteration of the atrium of infection, frequently results in recovery. This recovery, however, does not change the theoretical and clinical rule, but simply casts doubt upon the possibility of making an absolute diagnosis of general peritonitis. It may be possible, too, that the resisting power of the tissues of the patient or the self-limited nature of the course of the infection, dependent upon the life history of the microbe, may have something to do with the favorable result. The more liquid the effusion and the less fibrinous, the better the chances are that drainage will be effective. It is impossible to conceive of any adequate drainage when the intestines are covered over a great part of their extent with infected fibrinous exudate.

Some operators have opened the abdomen, found extensive suppuration, sewed up the defect in the gut, removed the appendix or gall-bladder, and then washed with infinite care and enormous quantities of aseptic or antiseptic solution the inflamed and lymph-covered intestines, and have then replaced them, either with or without drainage of the caudal peritoneal cavity, and in a few cases recovery has followed. It would seem that the cephalic peritoneal cavity was not affected in these cases, and that the whole of the caudal peritoneal cavity was either relieved of the bulk of its infection by the operation or by the drainage. Such a procedure as this was described by the young Johns Hopkins men in 1897, and has been practiced occasionally by gynecologists and

operators with now and then a successful issue. In my own experience most remarkable recovery has followed adequate pelvic drainage, but under no circumstance after the demonstration of a general fibrinous exudate in a general suppurative peritonitis has recovery followed.

The treatment of a supposed general peritonitis consists in such a laparotomy as will lead to the most likely atrium of the infection—to the appendix, to the gall-bladder, to the female genitalia, or to the wall of the stomach in cases of perforating ulcer of the stomach. When the effusion is approached, it is allowed to run off, and the space from which it flows is carefully sponged out with hot, moist, antiseptic sponges, which are immediately thrown away. When all fluid exudate has been removed with the greatest precaution against disturbing the relations of the intestinal wall of the abscess, the intestines are held cephalad or lateralward, with a broad, thick abdominal sponge in such manner as to give access to the supposed atrium of the infection. This is treated when possible by a suitable method, closure of the ulcer, removal of the appendix or drainage and closure of the rupture of the gall-bladder, and drainage is made through the abdominal wound and the vagina in females, and through the abdominal wound alone or through the abdominal wound and the rectum in males. This drainage consists in the introduction of a perforated tube of India rubber ten or fifteen inches long and an inch in diameter. This tube is surrounded with a large drain of antiseptic gauze either introduced with a Mikulicz protecting handkerchief, or with long strips, the ends of which hang over the abdominal wall. When the strips are introduced, great pains is taken to place one in each of the fossæ of the caudal peritoneal cavity, one in the subcecal fossa, one in the ileocecal fossa, one in the ileocolic fossa, and one or more in the pelvic and left ileocolic fossæ. In rare instances it is necessary to drain other abdominal fossæ. The ends of these strips are collected together and marked, either with tags or knotted silk thread, so that the last to be inserted may be first removed. The patient is kept in the semi-recumbent position, the opposite of the Trendelenburg, during the whole course of the operation, and when the drainage is thoroughly instituted the upper portion of the incision in the abdomen is closed in the usual manner. The vagina should be tamponed so as to allow liberal drainage from the tube without danger of infection, or the anal sphincter is paralyzed and the anus partially filled with gauze protecting the tube into which gauze orthoform has been incorporated, to relieve the pain in the rectum. A rectal tube should be left by the side of the drainage tube to carry away the gas and prevent any infectious material from being forced into the peritoneal cavity.

After the application of a liberal absorbent dressing over the abdomen and perineum, the patient is put to bed in a semi-recumbent position, and given a liberal subcutaneous infusion of normal salt solution. The pulse, the temperature, the character of the urine, and the number of leucocytes in the blood, are carefully watched for indications of a favorable termination. If vomiting continues, and if the pulse remains rapid, if there is great anxiety and sleeplessness, if albumin and casts appear in the urine, if gas fails to pass the rectum, and if the leucocytes continue to increase in number, the progress of the disease has not been arrested, and the prognosis grows more and more grave. If the patient sleeps, if vomiting disappears, if the urine is abundant and the pulse relatively low in spite of a high temperature, a guarded prognosis, with a hopeful inflection, may be given. There is no time from the end of such an operation to the end of the second week when an unqualified favorable prognosis can be expressed. The danger seems to diminish when the fifth or sixth day has passed without positively unfavorable manifestation. Most of the patients die either at the end of the first twenty-four hours or between the fourth and sixth day. Should the patient survive the fifth day, it will be necessary to begin to remove the tampons, or to irrigate the drainage tube with a mild antiseptic, or even to do both these things. The gauze is removed by care-

fully moistening the presenting part of the last introduced roll with an antiseptic solution, and then with the utmost care detaching it by a slight pull toward the right and then toward the left from the edges of the abdominal wound. This gentleness must be practiced not so much to save the patient the pain and the dangerous movements of the body which might result from it as to obviate any breaking up of adhesions between the viscera surrounding the tampon. The greatest skill and appreciative judgment must be used in every slightest movement of the gauze in the course of its extraction. All the gauze ought to be removed by the end of the eighth or tenth day, but under no circumstance should it be extracted with any violence. After the removal of the last pieces of gauze the abdominal wound must be kept open with smaller strips of gauze or with a tube. These must be removed daily and the suppurating sinus kept clean with suitable irrigation. Sometimes these sinuses are very prompt in closing, and at other times they endure for weeks and months, especially if they are connected with the interior of the bowel.

The treatment of a diffuse peritonitis is always conducted upon the presumption that it is a general peritonitis, and the methods of treatment are not different in any particular except when they are limited by the greater probability that this diffusion is limited to a smaller area of peritoneum. When the uterus is the source of the infection, no attempt would be made to drain the cephalic peritoneal cavity or even the ileocolic fossa. If the appendix is the source of the infection, the drainage may be confined to the pelvis, the subcecal, the ileocecal, and the ileocolic fossæ. If it is a perforating ulcer of the stomach, then the drainage would naturally be confined to the cephalic peritoneal cavity.

All operators agree that there is no expectant treatment of peritonitis; that the prime imperative duty of the attendant is to remove or obliterate the source of peritoneal infection at the earliest possible moment, remove the disseminated infection as completely as possible, and place the peritoneum and the patient in the best possible condition for recovery. There is practical unanimity in the immediate removal of the source of infection. Whatever the other conditions are, the chances of recovery are better with the offending appendix removed or the leaking and perforated ulcer closed than if left undisturbed. The only added risk is the traumatism of the operation. As Joseph A. Blake remarks: "I think that any of the advocates of the treatment by rest will concede that the patient would be much better off with the appendix out if it could be done without an operation. We have simply to weigh the dangers of the additional toxemia of the anesthetic and the shock of operation against the danger of continued infection, both systemic and peritoneal, from the appendix itself or the escape of its contents."

In regard to the next proposition, namely, the removal of the escaped infection, two methods are followed, the dry method and the method of irrigation. The former is slower and probably less complete; the latter is more rapid, but frequently results in the further dissemination of the infection. In the hands of some operators it has been practiced with remarkable success. It has always seemed to me a dangerous procedure. It is probably necessary when drainage is not used.

In regard to the last proposition, namely, the placing of the peritoneum in the best condition for recovery, there are two very divergent opinions which must be considered —the one is drainage, which all operators concede is necessary in some cases, and the other is complete closure without drainage, a method which has produced remarkable results in the hands of some operators. I have changed my opinions and practices in antiseptic surgery too often to deny the possibility of another change, and yet I have never had the hardihood to close up a diffuse suppurative peritonitis after the most complete primary disinfection which I could accomplish and the satisfactory removal of the source of the infection. I am ready to concede that it is desirable to avoid drainage, I admit that the peritoneum has unequaled power of destroying infection, and I recog-

ize that in certain cases I have seen most remarkable germicidal power exercised in this cavity; nevertheless, while admitting the reliability of all that has been published by the advocates of closure of the peritoneum, I still practice this treatment, so undesirable and so prone to encourage complications.

One of the most threatening symptoms of a general peritonitis, or even of a local diffuse peritonitis, is intestinal obstruction due to the paralysis of the muscles of the intestine by the adjoining infection. The obstruction is often so complete, the distention of the gut above the obstruction so excessive, that no amount of drainage is sufficient to overcome it. It is then necessary to treat the obstruction and distention as a secondary condition from an etiologic standpoint, but as an imminent and immediate indication for treatment. The gut must be brought into the wound and a temporary artificial anus formed to allow the discharge of feces and gas and permit the overdistended gut to collapse. This artificial anus adds greatly to the horribly mutilating and disgusting treatment. It increases the suffering of the family, but gives the only possibility of recovery to the patient. As a rule it closes in the course of a few weeks, or it remains and must be treated surgically.

Discussion on Dr. Holmes Paper.

I have followed Dr. Holmes very carefully through his interesting and scholarly paper, and have been highly entertained. To discuss this large and important field of surgery from the view point of peritonitis is an excellent way to make it instructive. In regard to the indications for operation in appendicitis, the storm centre of the paper, very much has at different times been said. The position taken by Dr. Holmes, that in undoubted cases of appendicitis it is always safer to operate than not to operate may be called the high ground of radicalism on this subject. From this position there has been some falling away in high places. There are cases that will certainly die operated upon or not. Many cases die that are entitled to live, the main causes of death being slow, bungling work, and especially insufficient drainage. But to operate when there is no chance of saving life brings surgeons into disrepute, and increases the dread of the knife, so deeply rooted in the human mind.

On the other hand, the mischievous practice of waiting and postponing when there is no well-grounded objection to an operation, has caused many more deaths than all the bold and aggressive operating since the appendix first fell under the surgeon's displeasure. There will, it seems, always be some little difference of opinion on this subject, though every well informed man knows the great danger of leaving a diseased appendix in the abdomen. Dr. Holmes has strengthened me in my views, although I have never quite reached his radical point of view.

Dr. Bayard Holmes (closing the discussion.) The remarks of Dr. Burlingame and Dr. Pelton, as well as those of Dr. Bridge, show the spread of the pernicious schism which has swept over the country during the past few years. The origin of this schism, its growth and spread, is a subject which will always interest the medical historian and will ever be pointed out as disclosing a radical defect in the education and character of our profession. It has cost more than the Spanish-American war in the lives of our young people; it has been a source of greater evil to our profession than all the traveling quacks in Christendom.

There is no time in the course of an appendicitis when an operation is not indicated, and there is no time too early to operate so far as the patient is concerned, though there may be a time too late to promise a favorable issue. In appendicitis, as in many other things in this life, it is the early bird that catches the worm.

Let us thank God that medicine has not advanced in America to that cold scientific heartlessness which it seems to have reached in Austria. On returning from Vienna my assistant described to me the daily visits of a celebrated Internalist to his wards. One patient was examined from day to day with a pouting abscess in the right iliac region while he discussed the probability of its being of perirenal or periappendiceal origin. When a general peritonitis had brought the patient to autopsy, such terrible havoc and destruction had been wrought that even the postmortem dissection could not answer the question. To await a demonstration or to await an operation in an interval is unnecessary, criminal and fateful to the patient when early observation has demonstrated an appendicitis.

TREATMENT OF PNEUMONIA.

BY CHAS. J. WHALEN, M. D., LL. B., CHICAGO.

I cannot help but feel a natural hesitation in presenting to this society, my views on the treatment of pneumonia. While I have no new method of treatment to advocate, yet I earnestly believe that your experience has been like my own, one of disappointment, in dealing with this grave disease and I have therefore thought it wise to review existing methods if only for the sake of approving some and disapproving others. In my experience with pneumonia I have used all or

nearly all of the many treatments which have been from time to time, suggested. To enumerate them would be a waste of time but it would demonstrate the degree of dissatisfaction that exists among the profession regarding the treatment of this disease. In a word it may be said that where so many radically different treatments are recommended for a disease none are wholly satisfactory. I am therefore forced at the outset of this paper to say that we have no known universal or generally accepted form of treatment for pneumonia. This statement is borne out by statistics which show that the percentage death rate by pneumonia has greatly increased during the last decade and that it has surpassed the great "White Plague" (consumption) in its rate of mortality and it is therefore justly styled the newer "captain" of the men of death. (Bulletin of the Health Department of Chicago).

TREATMENT OF PNEUMONIA.*

Since the beginning of the last great pandemic of influenza in 1889 there have been 33,861 deaths from pneumonia in Chicago and 29,980 from consumption, an excess of 11.4 per cent of pneumonia mortality. During this period, that is the last 13 years, 1890 to 1902 the deaths from pneumonia have increased from an average of 117 in the one hundred thousand of population during the previous 13 years 1877 to 1889 to 179, an increase of nearly 53 per cent. Corresponding figures for consumption are 171 per one hundred thousand in the first period and 160 in the second, a decrease of a little more than 6 per cent. (Bulletin of Health Department of Chicago.)

Chicago's Bulletin of the Health Department for the week ending March 5, 1904, says between November 1, 1903 and March 5, 1904, a total of 2,186 deaths from pneumonia have been reported; they form 21.4 per cent of the mortality from all causes, while 970 deaths from consumption are reported for the same period or 9.5 per cent of the total morality from all causes. The following table shows the total deaths from all causes, the deaths from consumption and from pneumonia and the proportion of these latter deaths to total deaths in New York and in Chicago thus far during the current pneumonia season—November 1, 1903 to March 5, 1904, inclusive:

	New York	Chicago
Total deaths, all causes.....	26,195	10,17[illegible]
Pneumonia deaths.....	5,506	2,18[illegible]
Consumption deaths.....	2,908	97[illegible]
Proportion per cent of all deaths—		
From Pneumonia.....	21.0	21.[illegible]
Consumption	11.1	9.5

The census of the United States of 1900 indicate that 105,971 persons died of pneumonia in the United States during the preceding year, a death rate of 190 per 100,000 population, as compared with the reports of 1870, 1880 and 1890 it shows that the mortality in this disease has markedly increased. And this increase is taking place notwithstanding the fact that the mortality from other infectious diseases is decreasing. Improved sanitary conditions in our city has raised the age limit to a marked extent, as the latest census show that the average age at death has been increased from 31 to 35 years. In our own generation we have seen the mortality of our large cities cut in two and we have also seen the death rate from consumption so much lessened as to make us confident of eventually permanently eradicating the disease, yet in the same period we have witnessed this increased mortality from pneumonia and so marked has been the increase that it has now displaced tuberculosis in its work of death.

It is now quite well known and recognized by the best clinicians all over the world that pneumonia is contagious, the cause being a micro-organism in the sputa of those suffering from the disease and that the malady is propogated by inhalations, such being the case it would therefore seem important in the treatment of pneumonia to insure precautions against the spread of the disease by teaching the general public that there is always danger of contagion from a pneumonic patient. They should be impressed with the fact that the expectoration accom-

*Read at the 54th Annual Meeting, May 17, 1904.

panying this disease reeks with bacilli and in order to avoid all danger of infecting others certain prophylactic measures should be adhered to.

The same care should be taken to collect and destroy the sputa from a pneumonic patient that is taken in cases of pulmonary consumption. The secretions should always be destroyed by fire. I do not believe that any attempts should be made to destroy the pneumo-cocci by means of antiseptic solutions, they are uncleanly and are usually inefficient and are very much more inconvenient than the measures of the destruction of the bacilli by fire.

The expectoration should be received in gauze or paper which should be preferably burned immediately, and under no circumstances should it be allowed to dry as by this means the pneumo-cocci find their way into the lungs with the respired air. The diplococcus pneumonia may live for long periods of time in the mouth and pharynx of those who have had the disease, it is therefore wise as long as the patient continues to expectorate that the secretions from the bronchial tubes should be destroyed the same as during the active stage of the disease and in addition the patients mouth should be frequently washed with an antiseptic mouth wash. Pneumonia is often begotten by overhousing, over crowding, over eating and drinking and over clothing, all of which tends to lessen the natural vital resistance to the attacks of the myriads of invisable foes that are harmless to the healthy individual. The public therefore should be taught to apply thorough ventilation in offices, factories, churches and houses of public amusements if we hope to reduce the mortality from pneumonia.

In most cases of uncomplicated croupous pneumonia nature unaided is capable of effecting a cure through the compensatory powers of the body for neutralizing pathologic processes. Often, therefore, no therapeutic remedies are required as the disease tends to recover and drugs unnecessarily administered may do harm by interfering with digestion, promoting nausea and vomiting, all of which tends to cardiac weakness. It is safe to say that pneumonic patients are more often damaged than helped by the poisonous drugging which is still only too prevalent. What is needed in the treatment of this disease is not more drugs but the discriminating and intelligent use of those we have. My rule is to give as little medicine as will meet the indications in each individual case. It being a self limited disease which can neither be avoided or cut short by any known means at our command and may even under the most unfavorable circumstances terminate abruptly without a dose of medicine having been administered. These facts do not mean that drugs and medical treatment are valueless in pneumonia; this would be as absurd as it would be to pour useless and harmful drugs into the patient as soon as the diagnosis is made. Drugs and other remedial measures are indispensable, and if properly used save lives, but they should be employed only when needed. What should be done is to steer clear of therapeutic nihilism on the one hand and polypharmacy on the other or in other words we should treat the patient and not the disease.

HYGIENE.

The management of the patient is the most important measure. The institution of intelligent hygiene, of careful nursing, of proper diet and the mitigation of the most distressing symptoms are in order, nothing should be considered too slight or too insignificant in treating cases of pneumonia. The care of the mouth should receive early attention for a foul tongue promotes indigestion which is quite an injurious complication. An antiseptic mouth-wash in hot water two or three times daily will always be appreciated. The surroundings should be cheerful with perfect ventilation, the temperature of the room should be between 68 and 72 degrees F. an abundance of fresh air will do much to prevent circulatory failure; these details should always be looked after before beginning the administration of cardiac stimulants. The tissues can only use a certain amount of oxygen but that ought to be furnished from an atmosphere that is pure and unvitiated. An oil stove

or worse yet, a swarm of visitors in a sick room may be the means of killing a pneumonic patient by robbing him of fresh air and oxygen.

REST.

Absolute rest in bed from the very beginning is imperative. The patient should not be allowed to raise himself in bed for food or medicine and the bed pan should be used from the start. Anything that will add to the comfort of the mind and body is a real and valuable aid to recovery. The constant annoying by too frequent sponging, moving, giving food and fussing about the patient is contra-indicated. Rest and sleep are sometimes of far greater value than drugs, therefore a part of any treatment should be to insist on proper intervals of absolute rest of two or three hours and the giving of food and medicine should be so outlined for the nurse that during the 24 hours there should be several periods of absolute rest. All visitors must be firmly refused admittance to the sick room. It is our duty to see that the patient does not kill himself by his indiscretions or his friends kill him by their misguided zeal or that we ourselves snap the slender thread of life in our anxiety to give relief. For there is no other disease in which the idea of combating death presents so active a clinical picture. The condition changes from hour to hour, the time for combat is brief and no matter how severe the odds against life may appear there is always a "fighting chance," hence the temptation for active interference may outweigh ones calmer judgment and the patient may lose through exhaustion that strength which might at the last moment have turned the balance in his favor. While these matters form a part of good nursing yet they cannot be left to the nurse without detailed instructions from the physician.

SPONGING.

Occasional sponging of the skin with warm or tepid water is agreeable to the patient and exerts a favorable influence when no drugs are really required. It is a comfort to the patient and in addition it is a satisfaction to the friends as it assures them that something is being done to make the patient comfortable.

ELIMINATION.

Water for drinking purposes should be supplied freely and in order to assume vicariously as fully as possible the function of the incapacitated lung and to prevent the accumulation of toxins the organs of elimination must be kept active. Diuresis is usually maintained by taking freely of plain or medicated water but in case the kidneys are found not secreting sufficiently the subcutaneous injection or an enema of normal physiological salt solution will usually meet all the requirements necessary and because of its beneficial effects on the heart and respiration is a valuable routine measure. At the outset of the disease elimination of the bowels should be promoted as rapidly as possible by means of catharsis, non-effervescing salines or calomel in small doses, frequently repeated is to be recommended, but routine purgation is condemned as it is apt to exhaust the patient.

DIET.

Digestion is always slow and imperfect in pneumonia and if food is taken in too large an amount or in any but the most digestable forms it is apt to undergo an abnormal fermentation in the gastro intestinal tract and produce toxins. This adds to the burden of the organs of elimination perhaps already overtaxed in trying to eliminate the toxins peculiar to pneumonia. The diet therefore should be plain and nourishing and easily digestable. Milk plain or peptonized if necessary should be the chief article of nourishment as it gives a maximum of nutrition with a minimum of bulk. From a quart to two quarts of milk every 24 hours is amply sufficient. If the patient tires of milk a similar amount of barley water or broth may be given. Under favorable conditions Matzoon, Kumyss, Beef Tea, Egg Albumen, or orange juice may be substituted; after the crisis in addition to the above a very limited amount of solid food may be allowed.

TOPICAL APPLICATIONS.

In the treatment of pneumonia I have given a fair trial to all manner of topical applications to the chest wall. Blisters,

cupping, leeches, hot and cold poultices, ice packs, cotton and flannel jackets covered with oil silk, etc., etc., and I am convinced that they have not the slightest influence on the course of uncomplicated pneumonia, but in cases in which pleurisy is a complication leeches, cupping, blistering, hot or cold applications may be of great value in relieving the intense pain which accompanies the inflamed pleura. As a rule heat is more agreeable than cold but there are many exceptions and the choice between the two should be decided by the patients comfort. In uncomplicated pneumonia however, for its psychical effect on the patient and friends I believe that a cotton jacket should be applied to the whole trunk maintaining it firmly in place and covering it with oiled silk leaving it on during the entire course of the disease save when an occasional examination of the chest is imperative.

Thompson's experiments to determine the depth to which external applications of both heat and cold could be made to locally modify deep seated body temperature confirms the opinion I have long held regarding the value of topical applications in uncomplicated pneumonia. Thompson W. Gilman, (Journal of the Am. Med. Assn., March 19, 1904) experimented on several patients who had long sinuses resulting from chronic empyema; into these he inserted long stemmed thermometers for a depth of six or eight inches into the thoracic cavity then applying poultices as hot as could be borne (in some instances 130° F.) alternating with ice but in no instance was the temperature of the deeply seated thermometer capable of modification of more than 1-8 of a degree F., but similar experiments repeated on the cadaver show that the intra thoracic thermometers were decidedly influenced, the conclusion is justified that so long as the superficial cutaneous circulation is maintained, the constantly moving blood conveys away either of heat or cold any external application, thereby preventing a deep seated organ like the lung which has also an independent vascular supply from being influenced.

ANTIPYRESIS.

Fever unless it causes restlessness and remains permanently high is best left untreated. A temperature of 104 requires reduction as continued high temperature tends to bring about paralysis of the heart. I pay little attention to the temperature unless it gets above 104. If it should be persistently high hydrotherapy is indicated, ice bags to the head and cold sponging of the body are probably the safest measures. Cold tub bath because of the handling required is depressing and often unfavorably influences the pulse and respiration and should therefore not be recommended. Chemical antipyretics are to be disparaged, though of course they may be used as a specific in complicated conditions as for example quinine in malaria. Occasionally a single dose of some antipyretic has been known to give relief allaying pain and headache, reducing the fever and promoting sleep. Continuously administered or given after the second day of the disease they are decidedly injurious. Phenacetine being the least so of any of the cold tar products.

ARTERIAL SEDATIVES.

Arterial sedatives are less favored than formerly but still have some advocates. They should be used sparingly and their effects watched. I agree that there is a time at the very beginning of sthenic pneumonia when aconite will do good. Its primary action is stimulating of the peripheral nerve endings. Stimulation of the vaso motor mechanism also a powerful stimulant to the respiratory center. The secondary action is depression to the respiratory center, paralysis of the over stimulated peripheral nerves, pronounced depression of the heart, and reduction of temperature. It is a very toxic drug and can produce death by its toxic effect on the heart muscle. It should be classed among the heart depressants and its use limited to the early stages of sthenic pneumonia. Veratrum viride: It effects both the nerves and muscles of the heart, stimulating the inhibitor nerves and paralyzing the muscle. It is therefore not a safe drug to use in pneumonia when the preservation of cardiac strength is important and if used at all it should only be in sthenic cases during

the stage of congestion only. Blood letting is probably a more efficient remedy for lowering the arterial tension than either aconite or veratrum viride, as by this process the toxins are diluted and the volume of blood may be readily restored by saline transfusion.

TARTAR EMETIC.

Is now rarely if ever used as it neither shortens the disease, modifies its severity or lessens the mortality in pneumonia. Digitalis; opinion is against its use as a routine treatment. It is indicated only where pneumonia occurs in a patient with organic disease of the heart in which weakness appears or cardiac insufficiency becomes a prominent factor even in such cases; I believe strophanphus is preferable to digitalis, as it effects the heart with equal power and does not contract the peripheral arterioles to the same extent thereby increasing the work the heart has to do.

SPECIFIC MEDICATION.

It is a well known fact that this disease varies widely in severity at different times and in different regions. It is comparatively easy in a certain locality or during a particular season to collect data of a considerable number of recoveries from pneumonia which may be attributed by enthusiasts to specific lines of treatment.

Serum therapy, salicylates, creasote, quinine, calomel, potassium iodide, and a host of other remedies have from time to time been referred to as remedies capable of destroying pneumococci in the blood but today the majority of clinicians agree that we have no specific remedy for this disease and that the best results come from rational symptomatic treatment.

SERUM THERAPY.

Of all the specific treatments that have been recommended for pneumonia anti-pneumonic serum was the most promising, for it aimed directly at the essential factor of the disease toxemia, and while it might be said that serum therapy of pneumonia is still more or less in the experimental stage yet the results thus far obtained are far below our early expectations. It has certainly not yielded results in any way comparable to those obtained by anti-diphtheritic serum. While some favorable results from the injections of anti-pneumonic serum have been reported by a number of observers the consensus of opinion is that it is a useless remedy. In all I have used this remedy 16 times, all cases of croupous pneumonia; 5 had complicating pleurisy; 1 complicating measles and in 1 alcoholic; 2 deaths. The symptoms and course of the disease in all these cases differed in no way from cases treated under symptomatic medication, I have therefore abandoned the use of anti-pneumonic serums at least until a more reliable preparation is discovered. I believe however, that our chief relief for an improvement in our present method of treating pneumonia rests in the elaboration of a satisfactory form of toxin and notwithstanding the failures of many observers in the past I believe it will be found.

CREASOTE.

Creasote in some form I have used for 11 years in selected cases and since beginning its administration I am inclined to place confidence in it. I find that in some cases it markedly reduces temperature, lessens the severity of the cough and pain and otherwise seems to act beneficially. It is especially valuable in mixed infections. I find that the toxemia is always milder in cases so treated but I am unable to say that the mortality has been materially lessened by this method, because of the severe disturbance of the stomach which may follow the use of creasote or guaiacol internally. I have for several years been applying guaiacol externally, 5 to 10 drops being painted over the chest or abdomen 3 or 4 times a day as the case may require. It may also be given by enema; 10 drops 4 or 5 times daily. Thiacol, a creasote preparation but devoid of its irritating qualities has been put upon the market by Merck, it is well borne by nearly all stomachs in fact often improving the appetite and digestion and is the only creasote preparation that should be given internally. It can be administered in doses from 5 to 20 grains 4 times daily.

SALICYLATES.

Robert Liegel reports a very remarkable series of 72 cases of recovery of pneumonia under salicylate treatment, 8 of this series had emphysema; 6 cardiac disease and a large proportion were alcoholics. Not only under this treatment did recovery ensue in every case, but the duration of the attack was materially lessened and in no case did crisis occur, the temperature declining after the first day reaching the normal by the 5th when convalescence was established. Taylor reports 25 cases of pneumonia treated by the use of sodium salicylate, the only death was an infant 22 days old. The advocates of this remedy claim that large doses 120 grains a day or 10 grains every 2 hours should be given. I have found salicylates very depressing and they are certainly irritating to the stomach and can therefore only be administered to a small per centage of pneumonic patients and after a thorough trial I discarded it as being a useless remedy in the treatment of pneumonia.

QUININE.

It was claimed by the elder Flint and by some physicians at the present day that sulphate of quinine in large doses say 20 or 30 grains daily renders the disease abortive and that when this does not follow the disease is often modified to a greater degree than by smaller doses. As I have never seen any benefits derived from the use of quinine either from large or small doses I do not hesitate to condemn it as a remedy for the routine treatment of this disease.

CALOMEL.

Calomel does not shorten the course of disease. It is an efficient diuretic and laxative and when used early in the disease by promoting elimination often relieves headache and delirium.

POTASSIUM IODIDE.

H. L. Altschul (Medical Record, March 26, 1904) reports the results of 250 cases treated by himself and colleagues with iodide of potassium with a mortality of one per cent. In all the cases the termination was by lysis, the duration was not shortened, the temperature never exceeding 104° when treatment begun early; complications never occurred. His method is to give an initial dose of at least 10 or 15 grains increasing it by 5 or 10 grains every 2 or 3 hours day and night according to the severity of the case, until defervescence is well established. In this manner he has in a large number of cases given 10 or 15 hundred grains a day of the iodide in a 50 per cent solution in milk and in one case as high as 1800 grains in 24 hours was given. In passing, I wish to say that I have had no experience with heroic doses of potassium iodide in the treatment of pneumonia. I do believe however, that it requires a more collective investigation to determine whether in reality any progress has been made by the use of this remedy in the treatment of this disease which is attended by so many surprises and the results of which are so uncertain.

BREWER'S YEAST.

The striking reduction in the cough and temperature and the general improvement of a few cases of phthisis whom I had taking brewers yeast led me to believe that pneumonia might be favorably effected by it. Brewers yeast is rich in nuclein, and nucleinic acid is capable of producing a leukocytosis (Huber) thereby increasing the body resistance. McClintock, Nevy and Vaughn (Medical News, May and October, 1893) have shown that the nucleins are powerful germicides and demonstrated that the germicidal quality of the blood is due to them. I have used it in 8 cases of croupous pneumonia and although the prognosis in three cases seemed extremely grave, all recovered. Disease ran the usual course, the symptoms immediately lessening in severity upon its administration. I believe it is worth a further trial. The therapy of fresh brewers yeast has heretofore been applicable only where it can be obtained daily fresh from a brewery. The difficulty of obtaining a fresh preparation which is essential for therapeutic activity has greatly interfered with its use. It is however, a cheap way of applying therapeutics and for this reason it may be given to the very poor. I admin-

ister the fresh beer yeast in beer in order to mask the taste giving three tablespoonsful daily. Under its influence the fever rapidly diminishes and the patient seems markedly benefited. It also seems to be of great benefit in chronic bronchitis of the aged, the expectoration and cough gradually decreasing. Under the names of levulin, levuretin and citcero chemists have put upon the market a dry form which is much more agreeable to the taste and is said to be as fully efficient as the fresh yeast, on this latter point I am not prepared to express an opinion.

OPIUM.

The profession is still at variance as regards the value of opium, while of inestimable value in certain selected cases if used at the right time, it is nevertheless capable of doing incalculable harm and I specially contend against its use. As I consider its routine employment a very dangerous practice in this disease. Only the experienced should administer it and when used much discretion should be applied in its employment. Occasionally it can be used safely in mild cases at the very outset, but it is especially dangerous in the later stages as it will make the respiration shallower and less vigorous thus contributing to the development of cyanosis. It is always contra-indicated when there is severe bronchitis accompanying pneumonia as it suppresses coughing thereby leading to the accumulation of mucus in the air passages in this way interfering with respiration. The pleuritic pain attending pneumonia in some cases is so distressing that it is absolutely necessary to resort to opiates. Occasionally when other remedies have failed it may be necessary to resort to opium to relieve delirium which may accompany the disease.

VENESECTION.

Physicians thirty years ago bled in cases of threatened cardiac failure in pneumonia and good results led them to bleed again; this method of treatment is coming more into favor at the present time. While in certain cases venesection has no efficient substitute at the same time the excessive bleeding of former days I hope will never be restored to popular favor, yet the physician who wholly abstains from venesection often deprives his patient of a most valuable remedy. The very old, extremely young, the weak and anaemic should not as a rule be bled nor should it be resorted to in others in whom there is no evidence of obstruction of the pulmonary circulation or increasing toxemia but in the robust when these conditions exist the lance should not be spared.

The symptoms calling for venesection are distended jugular veins, cyanosis and a strong apex beat with a weak pulse showing that the right ventricle is unable to overcome the obstruction in the lungs.

There are two periods in the course of pneumonia when venesection may be of service in the first stage and at a later date when cyanosis and overdistension of the right heart threaten the patient. In robust patients at an early stage the lancet will apparently cut short the disease. With an obstructed pulmonary circulation there is a damming back of the blood into the right cavities of the heart and the general venous system. The breathing is accelerated and labored anxiety is depicted on the countenance. It is here that the opportunity for doing good is often lost by hesitation. As the successful outcome of the case often depends upon the ridding the system as speedily as possible of the poisonous matters circulating in the blood. Free bleeding is the remedy *par excellence*.

While it is claimed by some that late venesection is a mistake in cases where there is rapid invasion of the lung the right ventricle cannot cope with resistance in the pulmonary circulation and is being paralyzed by over distension. I believe this statement not to be wholly true for I have seen patients at this time markedly benefited by late venesection. The patient being extremely cyanosed and unable to speak and scarcely able to breathe, the eyes staring and beads of sweat standing on the face and forehead; the pulse small and scarcely perceptible yet the relief from bleeding was most striking; pulse improved as the blood flowed; the breathing was relieved and when 10 or 15 ounces of blood had been withdrawn all the distressing

symptoms had disappeared. The same results are not to be expected when asthenia has become a prominent feature in the symptoms. In a proper case for venesection the procedure is as follows: withdraw 10 or 15 ounces of blood, this amount will usually be sufficient, more can be removed later if necessary. If the patient bears well the loss of blood the 15 ounces should be withdrawn, if on the other hand the patient does not bear well the loss of blood not more than 10 ounces should be withdrawn.

Venesection is found to be more effective when used with a physiological salt solution. By the former we attempt to relieve the tendency to right sided heart failure and remove a certain amount of toxin laden blood and by the latter we increase the pulmonary circulation, dilute the toxins that remain and increase the oxygen carrying capacity of the blood. Just before resorting to venesection a subcutaneous injection of 20 ounces of physiological solution should be given. The solution is prepared according to Jennings formula as follows:

Sodii Chloratis .....30 gr.		2.
Potassi Chloratis .....60 "		4.
Sodii Sulphatis .....60 "		4.
Sodii Phosphatis .....40 "		2.66
Aq. Destill. Q. S. ad.....	6 oz.	192.

M. Sig: Use one part of this solution to sixty of distilled water subcutaneously. This is preferable to the intravenous injection because it is slower and the effects more gradual. Before using, the fluid should be warmed to a little above the body temperature. The ordinary antiseptic precaution being taken, the injection should be multiple into the subcutaneous tissues preferably of the chest, thighs or back. Often high enemas of the saline solution may be substituted and when well borne and retained produce equally good results. Indeed high enemas of normal salt solution is now a routine treatment with me right from the inception of the disease. I have repeatedly seen the delirium quickly relieved and elimination through the sweat glands and kidneys promoted, the temperature lessened and the heart markedly stimulated by this method. It is claimed by some chiefly on theoretical grounds that subcutaneous injections of salt solution would often produce pulmonary oedema, although I have had considerable experience with this method I have as yet not met with this complication but on the contrary in a number of desperate cases I have been inclined to think that it saved the life of some patients when they seemed beyond hope of recovery where the pulse was scarcely perceptible, extreme cyanosis and complete asthenia being present the injection 500 or 1000 c.c. of hot (110° F.) normal salt solution in some instances produced striking results, being followed by gentle warm perspiration free action from the kidneys, a lessening of dyspnoea and delirium, abatement of cerebral excitement and a clearing of the intellect. However, I do not say that pulmonary odema might not occur and it would therefore be well to have instruments kept in readiness for instant bleeding in case the second sound should become too accentuated in quality.

STIMULANTS.

Stimulants are not always necessary but often useful and should be reserved until they are indicated. The best indication and the one most difficult to meet in the sympmatic treatment of pneumonia is cardiac weakness which is always manifested by a small weak and faltering pulse, dry tongue, restlessness and delirium. A pulse that is poorly filled and gradually increasing in rapidity until a 120 to 130 or more beats per minute are reached generally calls for a heart stimulant. When the second sound of the heart at the pulmonary orifice begins to grow faint and poorly accentuated failure of the right ventricle is apparent, it is the most valuable sign of heart failure. Alcohol, strychnine, nitro-glycerine, camphor, suprarenalin, ammonia and normal salt solution are most to be depended upon as heart stimulants.

ALCOHOL.

Alcohol as a stimulant has withstood the test for the last fifty years and is regarded by most clinicians as the best remedy with which to combat the cardiac weakness of this

disease. It should be used only when the pulse and general condition require it. While it is often of the greatest importance many patients do best without it, but with a feeble dicrotic pulse, a dry tongue and a profoundly asthenic condition it is best to give it in the aged and in pneumonia of drunkards it is indispensable. In the former it should be given early and in moderate amounts but in the latter class of cases much larger doses are required. In some instances 15-20 or even 24 ounces a day being absolutely necessary. If a patient sleeps after a little whisky, brandy or champagne or if the pulse becomes less frequent or larger it has done good. It should as a rule be given to the extent of from four to five ounces in 24 hours, in some exceptional cases considerably larger amount may be required, and again in others whisky and champagne or brandy and champagne seems to have a better effect than either alone.

STRYCHNINE.

After alcohol our thoughts naturally turn to strychnine, for as a circulatory stimulant it is always efficacious, it is perhaps the best respiratory tonic that we possess; when respirations are exceedingly rapid and shallow and the pulse fast it should be given with a free hand. No specific dose can be recommended, but its administration should be pushed to the extreme limit of safety. Doses varying from 1.32 of a grain three or four times a day to 1.15 of a grain every two or three hours have been recommended. The dose however, should be regulated by the action of the heart, my rule is to give it in as ascending doses of from 1.60 to 1.20 of a grain every 2, 4 or 6 hours as the case may require; careful watch being kept for the appearance of untoward symptoms. In severe cases it should always be given by hypodermic injection. While premature and excessive stimulation may do harm, the opportune employment of this drug may be the means of saving life. Caffein will often be found as a useful adjunct to strychnia.

NITRO-GLYCERINE.

Nitro-glycerine is an excellent adjunct and useful when renal secretion is scanty. It may be given in doses of 1.100th of a grain every four or five hours.

CAMPHOR.

Camphor either alone or in combination will be found to be a very valuable cardiac stimulant in threatening collapse or in tiding the patient over the profound depression that often accompanies or follows the crisis. It will also be found very serviceable when pulmonary oedema arises as a complication. It is best given hypodermically dissolved in ether or sterile olive oil in doses of from one to two grains every 2 or 3 hours.

SUPRARENALS.

I have treated a few cases with this remedy, the heart responded quickly to its use, cough and expectoration seemed favorably influenced by it but I feel quite certain that it is not the equal of alcohol, strychnia or the normal salt solution as a cardiac stimulant.

AMMONIA.

Ammonia sometimes makes a prompt and decided impression upon the circulation, the administration of 15 minims of aromatic spirits of ammonia every half hour has apparently saved life in some instances.

OXYGEN.

The value of oxygen inhalations are disputed. It is credited by some with striking though usually fugitive apparent benefit in the presence of lividity of the countenance and blueness of the lips, by others it is thought possible that with other respiratory and cardiac stimulants it may carry a patient through the dangerous stage of the disease, and by still others it is condemned *in toto*. It is true it will not check the progress of the disease and in cases where there is marked cyanosis it is rarely if ever that life is saved by its use, yet there is no doubt but that oxygen is palliative, that it makes the breathing easier, lessens cyanosis and conduces to sleep and in this way it aids in conserving energy and helps to maintain strength and adds to the general comfort of the patient. The trouble is that its use is generally put off too long. It should be commenced at the first signs of restlessness

or cyanosis and given in quantities sufficient to relieve; the administration should be intrusted to skilled hands and the dosage regulated according to circumstances. In severe cases it may be necessary to give it more or less continually for 5 or 10 hours, removing it only when the normal color is restored or to give the patient rest or food; in other cases half an hours use of oxygen every two or three hours may be sufficient.

EXPECTORANTS.

In a general way are contra-indicated as they are prone to disturb the stomach and interfere with the assimilation of nourishment. During the period of dense consolidation when the patient is usually at its worst there is but little material capable of being expelled from the solidified lung, later when the patient is being exhausted by coughing in his effort to rid the bronchi of tenacious mucus it may be well to aid its removal by the use of camphor or one of the ammonia compounds such as the carbonate or chloride or as a sedative expectorant cannabis indica may be employed. In exceptional cases in which the expectoration partakes of the nature of a bronchorrhoea it may be well to attempt to lessen it by small doses of atropine sulphate grains 1.150th or by the use of dry cupping applied anteriorly and latterally when the patient is too ill to be turned.

SPECIAL SYMPTOMS.

Tympanites should be carefully watched for as it embarasses the respiratory movements and is as much to be dreaded here as in typhoid fever. It can usually be relieved by giving a noneffervescing laxative or by the use of turpentine stupes or the giving of a stimulating turpentine enemas or the passage of the rectal tube to promote the expulsion of flatus.

COUGH.

Cough varies considerably in different cases, usually it does not require any special attention however it may be the most distressing symptom of the disease. For the hard dry cough of the first stage no remedy is so useful as small doses of Dovers powder later when the sputum is viscid ammonia chloride or carbonate may be given to facilitate expectoration but it should be withdrawn immediately if it causes disturbance of the stomach.

DELIRIUM.

Delirium in pneumonia may become a serious problem and require the use of drugs. When the delirium is the outcome of hyperpyrexia it may be controlled to a large degree by cold sponging or the wet pack and failing in these mild internal remedies should be first tried such as bromides, trional, paraldehyde. In a number of cases I have used hyoscin with very satisfactory results. As I have said before I have seen serious conditions result from giving even small doses of morphine in pneumonia, yet in a few cases when all other remedies have failed me in relieving delirium I have waived my objections to opium and have seen the most striking relief follow its use, yet I do not wish to be quoted as recommending it as a universal remedy for the treatment of the delirium of pneumonia.

DELAYED RESOLUTION.

Delayed resolution fortunately very rare is best treated by the use of tonics combined with Pilocarpine grains $\frac{1}{8}$ to $\frac{1}{4}$ three or four times a day, failing in these moderate doses of iodide potassium internally should be tried.

34 Washington st.

Discussion.

Dr. Ethan Allen Gray, Chicago.—Recognizing that pneumonia is a self-limited disease, it seems to me that the one great factor that we must consider in the treatment is the conservation of energy, and that means not only supporting the heart but also the nervous system, eliminating everything that might cause trouble. Controlling the restlessness by such measures as Dr. Whalen suggested, even the use of morphine carefully guarded, and holding right down to everything which can in any way support the patient, is essential. As supporters I would use morphine, strychnine, and, to a certain extent, superarenal capsule. I base my statement as to the use of suprarenal capsule on the experiments conducted by Crile, of Cleveland, who studied this remedy with reference to its action on the respiratory and cardiac centers. It is superior to strychnine, which after some hours exhausts the cardiac centers in the brain and results in the death of the patient, whereas, suprarenal extract or adrenalin keep up life almost indefinitely, of course, using that term

advisedly, but keeping the animal alive even under the most adverse circumstances after severing the pneumogastric nerve, and after the loss of much blood. In spite of this, he still was able to keep the animal alive all the way through. In my own work I have followed that very closely. I have used strychnine occasionally, and suprarenal extract persistently, and I have found that even in fatal cases the heart has been supported throughout the entire attack.

It is of value not only in supporting the heart, but it also assists elimination. In children, as well as in adults, I have found that the fever was moderated, and in certain cases where the drug was used in conjunction with general treatment, such as I have outlined, I found that the duration of the disease is shortened. That may be taken for what it is worth, but I have seen cases terminated in five days, and even in three, and, in the main, the condition of the patient has been good.

Another important aid is the use of cold. I say cold because my experience last winter convinced me that the best thing to use is cold. I always opened the windows so that the water in the steam coils froze, but the patient slept without any opiate. In the morning, when the temperature of the room was raised, incident to the phycian's call, the patient invariably complained of being short of breath.

Dr. Whalen, closing the discussion:—I wish I had time to enlarge on a number of remedies that might be used as cardiac stimulants, and one of these is suprarenal extract, mentioned by Dr. Gray. I have tried it on a number of occasions, and I have yet to convince myself that it is a universal cardiac stimulant. It is not superior either to alcohol or strychnine, or a combination of the two.

Camphor and suprarenal extract are two remedies to which I have devoted a great deal of time during the past few years, studying their action as cardiac stimulants. I believe they are valuable adjuncts, but I must confess frankly that I am not ready to discard other cardiac stimulants for suprarenal extract.

PRESCRIPTIONS VS. SINGLE REMEDIES.

BY WILLIAM F. WAUGH, A. M., M. D., CHICAGO.

The employment of the active principles in medicine strongly opposes the habit of depending on prescriptions. Given, a remedial agent whose effect is uniform in the nature and the degree of its action, and the physician learns to study his case till he sees the indication for this remedy, and then he administers it until he perceives the effect he desires. If he has correctly estimated the need, and knows the remedy, the result is not doubtful but absolutely certain. His therapeutics takes from this a character of precision, of decisiveness, to which no approximation could be had under the old system. Hence, the use of active principles leads to the selection of single remedies for single indications. To give two or more medicines for a single indication would needlessly complicate matters, obscure the result, and hark back to the old idle, vicious system of giving a number of remedies in the hope that some one among them might happen to meet the true indication, which is not really recognized by the prescriber but only guessed at.

Numerous prescription books find ready sale. The most popular work on therapeutics is that which contains most prescriptions. The pocket case records are padded with prescriptions, that the practician may turn to them and select a formula that he guesses may fit his case, trusting neither his own knowledge nor his memory. Possibly some retentive memory may hold the formulas for brown mixture, compound cathartic pills and chlorodyne, but the writer does not believe one physician out of ten thousand who daily prescribes these can give the formulas and tell what indication exists for each of the ingredients, and how to ascertain whether the effect of each has been secured, and just enough of the desired effect and no more.

If the practician will learn the effects of each remedy singly, so that he can thus recognize it when manifested, he will be an accomplished therapeutist, far above the ordinary physician. He will not allow a patient in a hospital, under trained nurses, to die of strychnine poisoning and never suspect it until the victim is buried. He will at once distinguish between the phenomena attributable to the disease and those due to any drug that may have been taken. And this does not seem too much to ask of the man who holds the lives of the sick in his hands.

But the use of single remedies to meet single indications does not imply that but one remedy is always indicated at the same time. Disease is rarely so simple. In its causation, its pathologic nature, and its phenomena as they develop, there are frequently more than one indication presenting.

We may therefore administer several medicines at the same time, each to meet its own specific need. We have then to watch for the desirable effects of each, ready to increase, diminish or suspend it, without reference to the other agents given simultaneously. Hence we rebuild the prescription we had demolished, but on a totally different foundation. Instead of a formula for "typhoid fever," we have a combination of one remedy for the fever, another to sustain the heart, a third to disinfect the bowels, a fourth to subdue the tendency to nocturnal delirium, etc. And each of these remedies is given in doses nicely adjusted to meet the needs of that particular person, at that particular time, and is discontinued when the need has passed away. Thus the "prescription" may be varied every day; and is never the same for any two patients. It is a garment cut to fit the wearer, but elastic, expanding and contracting as the abdomen is filled or emptied, thickening as the days grow cool and becoming thinner when summer approaches. The old prescription is a suit of armor; if it does not fit you, and the enemy is at your gate—well, you can run faster without it.

Another step we have taken—a long one—and we must confess, a step backward. In some cases it has been found that the study of the conditions presenting in disease reveals a group of associated phenomena occurring together so frequently than a certain combination of remedies is indicated with corresponding frequency. This has led to the use of certain compounds for many cases. There are advantages and objections to this. The advantages are found in the ease of dispensing and taking a single granule instead of a number. The disadvantages are that the same dose and frequency of dosage is employed for different persons who may not respond similarly to each ingredient. Moreover, the use of these compounds tends to renew in the practician the very fault we have been trying to eradicate—the dependence on set and inelastic formulas.

When the physician gets beyond the "a-b-s" of his work and begins to see beyond disease names into disease conditions, the phenomena of the vaso-motors must impress him with their importance. In all febrile maladies and in a majority of others they are of cardinal importance. We know but little about them—we do not as yet know certainly whether we possess one, or two, or any special sets of vasomotor nerves—but the little we do know is priceless. To many physicians this talk of vasomotors is mysterious—it is Greek or worse—Hebrew—or even Aramaic. But in reality it is simple enough to be explained on mechanical principles.

Take as an example pneumonia: The beginning of the pulmonary inflammation sees an increase of the blood in the pulmonary capillaries—ergo, their caliber is increased, and this means that the vasoconstrictors are weakened, or paretic, since they are unable to maintain the normal caliber of the vessels by normal tonicity. This vasoconstrictor paresis indicates the use of digitalin or strychnine, which directly antagonizes it and restores the normal tone. It comes under the category of foods then, since it imparts to the cells what they require to restore them to the state of normality.

But this state of vasomotor paresis is not universal over the entire body, but only in the "inflamed" tissues. There is no reason to believe that the total quantity of blood in the body has been increased; its distribution has been disturbed, the circulatory equilibrium has been destroyed. As there is too much blood in the pulmonary capillaries, there must be too little in some other vessels. The caliber of the latter is therefore lessened, the vasoconstrictors are too strong for their antagonists, or are in a spastic state. We find that aconitine or veratrine will relax this spasm and restore the circulatory equilibrium by permitting the surplus blood to flow out of the dilated pulmonary capillaries into the vessels which should contain it.

By adopting either of these methods we combat the condition presenting in pneumonia, and accordingly we find one set of practicians stimulating the paretic vasomotors with strychnine, digitalis or ergot, while another set relax the spastic vessels with aconite, veratrum, antimony or blood-letting. And each rightfully claims that the treat-

ment is of benefit and saves far more patients than does the expectant, do-nothing method.

To the genius of Burggraeve we owe the discovery that both principles of treatment may be applied at one and the same time; that we may dilate with aconitine and contract with digitalin at once; and that the results are better than when either of these methods is employed alone. At first sight this doctrine seems absurd—for how can we stimulate and sedate at the same time? But this is perfectly in harmony with the behavior of the cells of the body toward foods. All the supplies for the body circulate equally through the blood; the bone cells appropriate lime, the nerve cells fat and phosphorus, the muscle cells iron, the other cells take exactly what they require to maintain their physiologic balance, and no more. We do not find either taking what may be required only by others. If each takes what it requires to maintain equilibrium, why draw a distinction between foods and medicines? There is none in reality. If the cell will be restored to equilibrium by a particle of aconitine the cell takes up the aconitine; if another cell requires strychnine, it takes it up, because that is what it requires. Hence the blood may carry both to every cell, and each will take up that for which its needs create an affinity; and physiologic equilibrium results. Hence the prescription of aconitine and digitalin together is based upon simple and easily comprehensible reasoning.

Digitalin has besides the important property of sustaining the heart, and this is universally admitted to be a cardinal necessity in the treatment of fevers. In some cases, known as asthenic, there is a greater need for such sustaining, and here it is customary to add strychnine arsenate, completing the celebrated Trinity or Triad of Burggraeve. In other cases, known as sthenic, there is need for the heart-action to be moderated, and for the doors of elimination to be opened widely, and for these purposes Abbott added veratrine to the basal aconitine and digitalin, forming the defervescent compound. The indications for one or the other of these combinations occur so frequently that they are usefully employed in a single granule. In treating fevers it is easy to change from one of them to the other, and back again, as the indications vary from day to day.

Somewhat different in its nature is a combination frequently employed for the relief of pain of a spasmodic character—and very many such exist, like the colics. The agent indicated is the most powerful of antispasmodics, atropine. To this we add glonoin because it dilates the blood-vessels quickly and allows the atropine to be more rapidly absorbed and carried to the seat of disease. Glonoin relaxes spasm quickly but its effects are evanescent. Atropine prolongs and sustains the effect. To these strychnine arsenate is added, for this reason: Spasm is not to be looked upon as an excess of nervous energy but rather the contrary. When the control of the nerves over any structure is weakened the first effect is spasm, which precedes paralysis. The use of strychnine in appropriate doses therefore increases the control of the nerves over their subject tissues, and in moderate doses combats the tendency to that disordered action that comes from imperfect control, which we denominate spasm. These three remedies therefore form a third triad, and one that is frequently required.

To illustrate the difference between these prescriptions and the older ones, take one purporting to come from one of the most distinguished therapeutists of the day—a man who knows better; for asthma he recommends belladonna, hyoscyamus and stramonium. Each of these contains the alkaloids of the solanaceae, atropine and hyoscine, in uncertain, variable quantities and proportions. Give any one of them, and you may get the action of atropine or that of hyoscine, in any degree from none at all to a toxic or even lethal effect. That makes two uncertainties to each—or six from the three.

Now if the physician deems it best to obtain the effect of atropine and hyoscine together—they are antagonistic over a portion of their fields—why not give exactly as much of each as he deems advisable, instead of

trusting to chance for his results? Of course, the chances are that he will get an atropine effect, little if any modified by the hyoscine, which is generally smothered under its powerful sister. But why not then give the atropine at once in definite doses, whose effects are so well known that the nurse may be directed just when to stop? By this means all possibility of an overdose or an underdose is avoided. All that is necessary to say to her is: "Give the medicine until the patient is relieved; or until she says her mouth is getting dry."

With the combination of three solanaceous galenics it is necessary to add: "But the medicine may not do either, but put her to sleep; it may stimulate or sedate her; and you will have to watch for either of these effects."

Some clinicians may have nurses who can be trusted with such directions; but we have found uncertainty as to the effects to be expected from medicines about the most disastrous lesson that can be taught the attendants of the sick, breeding doubt and timidity as to the drugs and corresponding distrust of the doctor who does not know what his medicines are really going to do. Directions to nurses can not possibly be too simple and easily comprehensible.

REPORT TO THE ASSOCIATED CHARITIES OF PEORIA ON "THE PREVALENCE OF TUBERCULOSIS IN PEORIA."

BY S. M. MILLER, M. D., PEORIA.
Chairman Committee on the Prevention of Tuberculosis of Peoria.

From January 1, 1893, to August 1, 1904, seven hundred and twenty-five deaths from tuberculosis of the lungs have been reported in Peoria, and over fifty more deaths from tuberculosis of other organs. This number does not approximate the actual mortality from tuberculosis in the city for this period. There are sources of error which reduces the reported number to a point far below the real death rate. The most glaring error is the inaccuracy of the early records. Thus, we find but one death reported in the six months from October to March, of 1896 to 1897. A second cause of shrinkage is, that of the cases reported under a variety of diagnoses, such as chronic bronchitis, pulmonary congestion and the like, many are undoubtedly cases of tuberculosis, while the deaths reported as due to hemorrhage of the lungs are almost without exception cases of tuberculosis, as other causes of pulmonary hemorrhage are rare indeed. Therefore, we must bear in mind that the statistics given in these tables range below the actual death rate from tuberculosis.

The proportion of deaths from tuberculosis of the lungs to deaths from all causes ranges as follows by years:

1893—7.05% of all deaths were due to tuberculosis of the lungs.
1894—8%.
1895—11%.
1896—9.4%.
1897—8.86%.
1898—7.93%.
1899—8.1%.
1900—9%.
1901—10.75%.
1902—11.14%.
1903—9.60%.
1904—10%.

The percentage mortality from all forms of tuberculosis is as follows:

	In the State.	In Peoria.
1901	11.12%	
1902	11.68	11.26%
1903	10.10	11.51
1904	10.50	

Thus we note the maximum death rate in 1895 of 11%, then a drop for three years, reaching the lowest point in 1898, since which time there has been a steady increase in the death rate from tuberculosis. By making allowance for the sources of errors, I believe we can conservatively estimate the death rate from tuberculosis in this city at 10 to 11%, or one death out of nine in Peoria is due to tuberculosis. This is a large mortality from this disease; larger than it should be, considering the readiness with which the number of deaths may be reduced:

it is slightly less than the average mortality from tuberculosis throughout the State, where the death rate ranges from 11% to 11½%.

In 1902, the deaths from all infections except tuberculosis numbered thirty-two (including typhoid fever, grippe, small pox, scarlet fever, diphtheria and croup) as against eighty-nine deaths from tuberculosis; tuberculosis causing nearly three times as many deaths as all the other infections combined. In 1903, these diseases caused forty-two deaths against seventy-eight from tuberculosis, a ratio of two of tuberculosis to one of all these diseases combined. Tuberculosis causes more deaths than any other disease, pneumonia coming second, with about sixty deaths a year. Thus the deaths

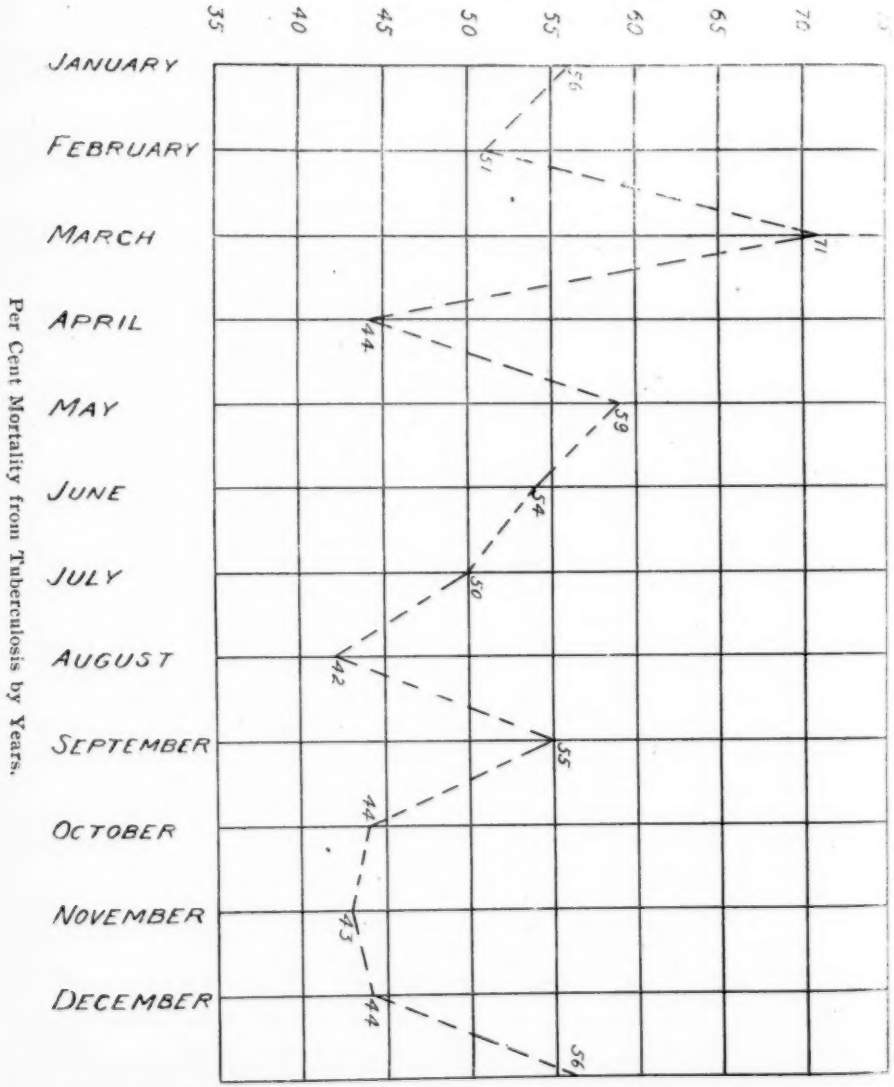
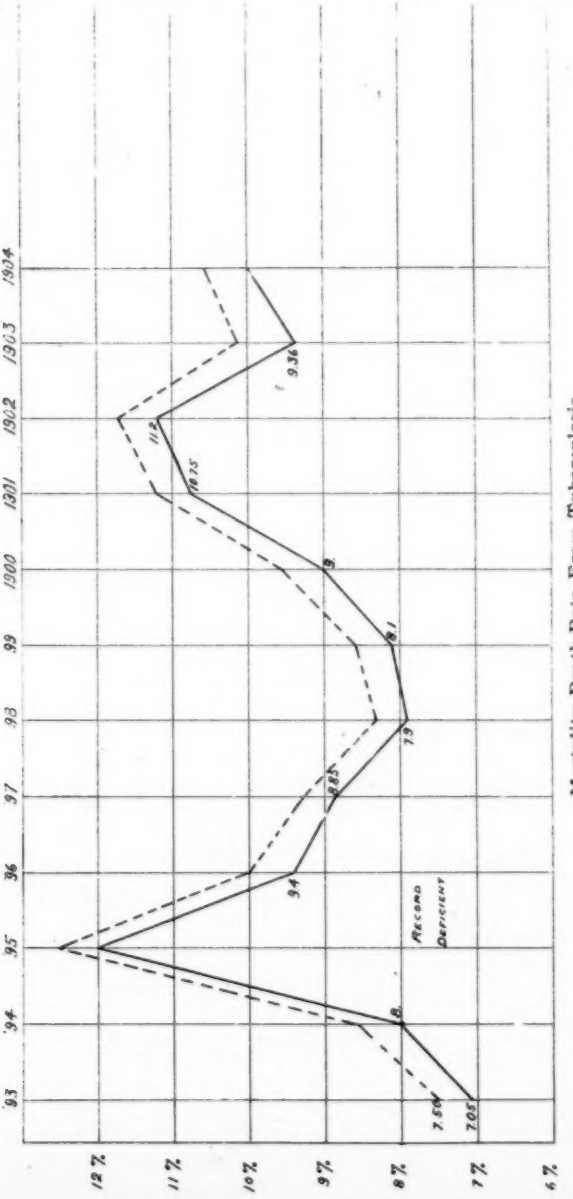


PLATE I.

from tuberculosis are half again as many as those from all forms of pneumonia. These figures demonstrate to us the jealous care with which we guard the spread of these other infections and the efficacy of our efforts in controlling them and our utter indifference regarding tuberculosis.

The average duration of the disease in fatal cases of tuberculosis of the lungs is one year and six months (Webster), and we may

PLATE II.



estimate that there are at the present time from 130 to 150 cases of tuberculosis in this city that will be dead in a year and a half, with heretofore no systematic effort on our part to control this disease.

AGE: The ages at which consumption has claimed its victims are as follows:

From	1 to 10 years	24 deaths.
From	11 to 20 years	73 deaths.
From	21 to 30 years	253 deaths.
From	31 to 40 years	166 deaths.
From	41 to 50 years	108 deaths.
From	51 to 60 years	46 deaths.
From	61 to 85 years	63 deaths.

Tuberculosis carries off three-fourths of its victims at that time of life when they are the most useful to society, and when, as wage earners and heads of families, they are the most indispensable to the maintenance and welfare of the family. It claims its victims in the very prime of life when the loss is the most keenly felt.

This chart was prepared by designating on the map the location of each fatal case of tuberculosis since January 1, 1893, by a red dot, and it gives a comprehensive view of the distribution of the disease in Peoria. It does not show a marked concentration of the disease in districts, but does demonstrate to us how uniformly prevalent the disease is throughout the city. Yet there are certain districts where it has been more prevalent than in others, and we must remember that this map represents only the deaths in a period of eleven years, while the city is over fifty years old, and if we should multiply the sprinkling of red dots by five, we would see a more definite localization of the disease than is shown in this short space of ten years. There is hardly a block that has not had a case and in a number of squares we find five to eight cases, and twenty-eight different houses have had from two to three cases each.

In nine instances I found the cases occurring in different families, i. e., the second case has contracted the disease by living in a house previously occupied by a consumptive.

We note first the relative exemption of the bluffs. Out of seven hundred and twenty-five cases on the map, in the wide area of the two bluffs, comprising two-fifths of the city's area, were eighty-four cases, about one-ninth of all. Undoubtedly the bluffs are more healthful; the air is clear, and free from dust and smoke; the houses are not so closely set together and they are newer. There is more breathing room; there are fewer infected old houses, acting as foci for the spread of the disease.

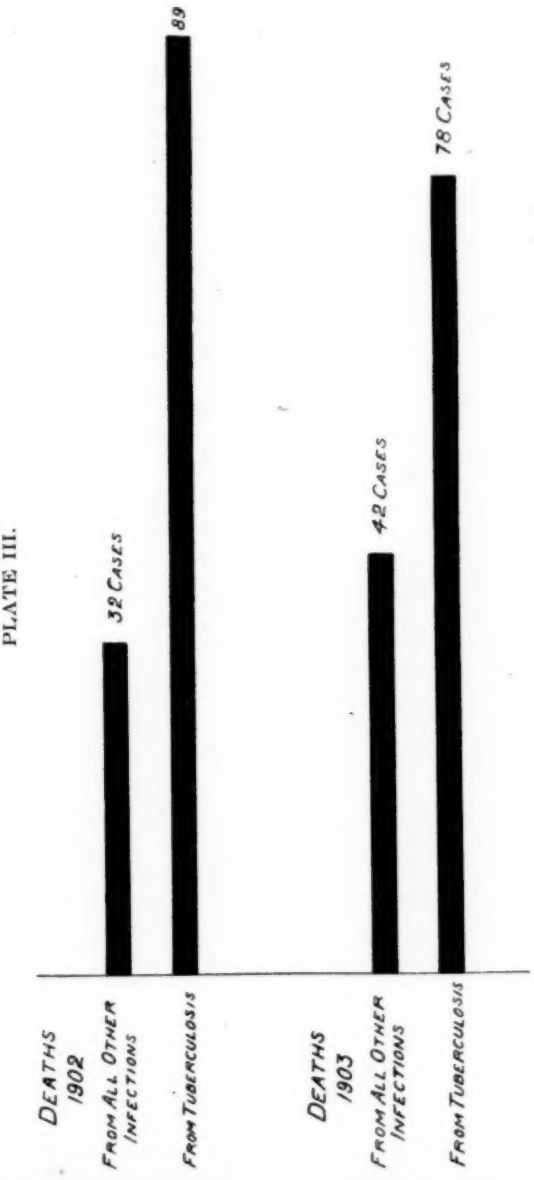
The district where I find the disease most prevalent is an area around the junction of Lincoln Avenue and South Adams street, within a radius of three or four blocks in all directions. Within this area there have been fifty-eight cases. There is scarcely a new house in this neighborhood. Next to this district that south of Madison, from Hamilton to Wayne, has fostered forty-six fatal cases, while north of Madison again the cases are few, except just under the bluff, on Glendale and the adjacent small streets, where there is a marked sprinkling of the cases.

It is not the number of the deaths particularly that impresses us, though this is far too high. The appalling thing is that the large majority of them are preventable, were we to adopt simple, yet painstaking measures of preventing the spread of the disease and of protecting ourselves against its insidious advances; measures by no means so rigid as we exact for controlling the acute contagious diseases.

THE REMEDY: We must first know who are the living afflicted with the disease before we can help them. Therefore, the first step for us will be to secure the passage of an ordinance, at once, making it obligatory upon physicians to report all cases of tuberculosis to the Health Department, just as the acute infections are now reported. Many objections will be raised, both by physicians and patients until it is understood that no publicity will be attached to this measure, and until it is known that it is our purpose to help, and not to hinder. It is a curious fact that people dread the truth in this matter and dislike to know that they are afflicted with this disease, but are quite content to

suffer so long as they can call it by another name. Nevertheless, this measure is necessary for the public health. This ordinance must further provide for a proper recording of the cases and for a proper supervision, especially of those cases where the hygienic surroundings are bad. Therefore, a second provision of the ordinance should be, that on receipt of the physician's report of a case, a representative of the Health Department

PLATE III.



Deaths From Tuberculosis in Peoria, as Compared With All Other Infectious Diseases.

visit the dwelling and note the following points on a suitable form.

1. Name of the patient in full.
2. Address.
3. Occupation. Does he still follow it; where employed.
4. Civil state. If head of the household or a dependent.
5. Number of persons living in the house.
6. Number of families living in the house.
7. Number of rooms occupied.
8. Does any other person occupy or sleep in the room used by the consumptive, and who?
9. General hygienic surroundings, as size of room, cleanliness, light, ventilation.
10. Previous tuberculosis in the family or house.
11. Would he go to a sanitarium.
12. Habits as regards the use of alcoholics.

Third, the ordinance should provide that the Sanitary Officer give verbal instructions as to the methods of the spread of the disease; the precautions to be adopted by the friends of the consumptive to avoid contracting the disease, especially a warning in regard to the danger from sputum. Suitable sputum cups should be provided. The danger of sleeping in the same room with the sick man should be noted; the necessity of cleanliness of the clothing and the hangings should be impressed upon the family. These same instructions should be distributed in the form of pamphlets similar to those which we have seen used in other cities.

Fourth, the ordinance should provide that the Sanitary Officer should visit each patient at least once a month, correcting as far as possible bad hygienic surroundings and giving additional instructions as necessary until the family in which the disease has obtained a foothold is duly educated.

I recommend that we secure the passage of a second ordinance, making it obligatory upon landlords to properly disinfect, under the direction of the Health Department, and according to prescribed rules, the premises which have been occupied by consumptives, on their removal or death, and before the dwelling is again used as a habitation, in order that it may be safe, sanitary, and germ-free for the next comer. The danger of contracting the disease from an infected house cannot be sufficiently emphasized. It is estimated that three-fourths of the cases are infected in the home, the remaining fourth contracting the disease in shop or store or other public place.

The ultimate step for the eradication of the disease is the establishment of a sanitarium, where the consumptive may be cared for properly, especially the poor and needy, those inadequately clothed, fed and housed, ill-conditioned physically and struggling to earn a living when absolutely incapacitated for work. A place where the consumptive may be cared for under the supervision of those skilled in combatting the disease; where he will have freedom from a work that was beyond his strength; where wholesome food, abundance of fresh air and sunlight, and proper sanitation will give him his best chance of regaining health. We have abundant evidence that tuberculosis taken thus early in a large number of cases is curable. By this we will accomplish two things. The individual will be restored to the community, with health regained; second, we will prevent the further spread of this disease from this individual by removing him from those surroundings where he is constantly infecting others.

The establishment of a sanitarium should be properly a duty of the municipality, yet it should be aided by those having the desire and means to do a practical philanthropy, for it is both a benefit to the community by safeguarding the general health, and a worthy charity to the poor consumptive.

Dr. C. A. David of 126 State St., Chicago has been sued by one Robert F. Walsh who asks $20,000 damages. Walsh's attorney stated that Walsh claims he was cut up unnecessarily when he was operated on by Dr. David.

Dr. Norbury's Sanitarium located in Jacksonville has been licensed by the State Board of Public Charities.

ATONIC DILATATION OF THE STOMACH WITH REPORT OF CASES: ALSO METHODS OF TREATMENT.*

BY MILTON H. MACK, M. D., CHICAGO.
Professor of Gastro Enterology, Illinois Medical College. Associate Professor of Gastro Enterology, Chicago Post Graduate School.

In this article I wish more particularly to deal with that condition in which there is a permanent enlargement of the stomach, due to atony of the walls, and not to obstruction of the pylorus, and with which there is associated a motor insufficiency to a greater or less degree.

Dilatation is one of the most common conditions found in the diseased stomach. Having had occasion to observe the great prevalence of these cases, and the infrequency of their recognition, I feel that a few words on this subject will not be amiss.

When the ease with which a diagnosis can be made in the great majority of cases is considered, there should be little difficulty experienced by the physician in determining the presence of a dilatation. The point to decide is whether the dilatation is of an atonic variety or is due to obstruction of the pylorus. This, of course, necessitates an extremely careful examination. Osler claims to have made a diagnosis in ten out of thirteen cases by inspection alone, in his wards at Johns Hopkins. These cases do not reach the physician as a rule until certain marked symptoms have made their appearance, thus aiding him still more in his effort at diagnosis. When this stage is reached these symptoms should, at least, lead him to suspect the condition present.

Several methods are at the physician's disposal to aid him in reaching his conclusions of both a mechanical and chemical nature. The chemical analysis showing the nature of the stomach secretions, of which in most cases, there is a decreased amount of the hydrochloric acid, but occasionally an increase or hyperchlorhydra is found.

Many times the stomach contents, when allowed to stand will separate into three layers. I consider this an almost absolute diagnostic point in a case of dilatation.

Furthermore, I have found it more frequently in the atonic form, than in those cases due to obstruction. This, I believe has not been the experience of most physicians, who have made a study of these cases.

It is easy, indeed, to determine the amount of motor insufficiency which exists by the removal of the contents remaining a certain length of time after a test meal, or by the residue found in the morning following a heavy evening meal. Several ways have been devised in a mechanical line to determine the extent of dilatation, and the exact location of the stomach, but I prefer the use of the gyromele, to all others because it is accurate regarding the greater curvatures of the stomach. Percussion will have to be used in order to locate the lesser curvature, this can usually be done with great facility following the administration of a seidlitz powder. While it is an easy matter to determine the size of the stomach and its location, it is by no means easy to decide whether this is of the atonic form or due to an obstruction. In order to differentiate between them it is necessary to carefully consider every symptom presented by the patient and to make a thorough physical examination. In the examination, such diseases as cancer, fissure of pylorus and ulcer must be excluded. This done satisfactorily, the subsequent handling of the case will readily suggest itself.

The symptoms present a varied picture. Many cases presenting none whatever are accidently discovered when examining for other trouble. Of course, I do not consider the abnormally large stomach, megalogastria, in which the functions are apparently normal, under this head. The symptoms may be only that of slight distress, or there may be actual acute pain. Vomiting cannot be considered as a constant symptom in dilatation, although present in many cases. Within the last few years, I have had several cases which have given the history of vomiting attacks, occurring occasionally over a period of from one to two years, then ceasing for a longer period, during which only slight discomfort

*Read at the 54th Annual Meeting, May 17, 1904.

was felt, and then suddenly developing a very distressful state in which no vomiting was present, but which upon examination, a marked dilatation was found.

Anorexia occurs in most of the cases, and in some respects this is an advantage in the treatment as will be seen later. Bloating, belching of gas and acid eructations are the accompaniments of the fermentation which takes place in those cases having progressed to any great extent.

Constipation makes its appearance in about 60% of all cases. Pain when present may be extremely severe and is generally due to the distension by gas, and the irritation resulting from the fermentative process.

The appearance of the patient is almost as varied as the symptoms, but is generally well nourished. Yet, I have had a few cases, in which the loss of weight was quite marked.

On physical examination it is not infrequent to find the greater curvature of the stomach located just above the pubes. Other cases vary between this and the normal. The lesser curvature may be only slightly displaced, and the gastroptosis not marked. It is the rule to find the liver area contracted considerably. This I do not think due to any inflammation of the liver proper, but to lack of nourishment of the part. Of course, if the dilatation is an accompaniment of a phthisical condition, as is frequently found, there is little difficulty in demonstrating a pulmonary tuberculosis. Disturbances of circulation are often found. The pulse rate varies greatly in different cases. The pulse in one of my cases showing a difference in sitting and standing of 30 beats.

CASES.

The following cases will serve to demonstrate this subject:

Case 1. Mr. H., age 44, German, married, presented himself at my clinic at the Chicago Post Graduate Hospital, June 2, 1903. He had been ill some months previous to this time. He gave the following history, pain quite marked at the epigastrium. He had had several attacks of vomiting but no blood was found. There was loss of appetite with occasional returns to the normal, but during these times he was afraid to eat on account of the subsequent distress. The bowels were constipated, with occasional attacks of diarrhoea. There was considerable bloating, some belching of gas and some acid eructations.

The physical examination showed marked emaciation. The peculiar cachectic appearance of malignancy was apparent but for some time we were unable to locate the seat of the disease.

He had the prominent protruding abdomen so characteristic of dilatation. The greater curvatures of the stomach was found to be about two inches above the pubes. A malignant obstruction at the pylorus naturally was suspected but never demonstrated. The heart area was enlarged, the liver area contracted, superficial veins of the abdomen greatly dilated, showing obstruction of the portal circulation. This patient was placed upon treatment, and in less than two month's time the stomach had contracted to its normal size. The patient had gained in weight and strength, had improved in appetite, but the malignant appearance still remained. The seat of this trouble was accidently discovered by my assistant in attempting to pass an extra large double stomach tube, the ordinary tube passing quite readily. It was located in the oesophagus about one inch above the cardiac opening of the stomach.

An exploratory incision was advised and declined. The patient disappeared and I was informed of his death some months later. I did not see the post mortem on this man, but understand there was no involvement of the pylorus whatever. This case is reported simply to show what is possible to do regarding the dilation itself, with proper treatment for this condition, under adverse circumstances.

Case 2. Miss W., age 42, female. First consultation June, 1903. Complained of loss of appetite, some nausea, belching of gas, bloating and acid eructation. She was extremely nervous and complained of insomnia. Constipation was present, and there was some pain on right side due to a floating kidney. She had had a hysterectomy one year previous on account of a very large

fibroid. There was slight loss of weight. Pulse was weak and thready. The stomach contents showed a marked decrease in hydrochloric acid otherwise negative. The greater curvature of the stomach was three inches below the umbilicus with slight gastroptosis. The liver area was contracted, the heart area enlarged, and the superficial veins dilated. The treatment extended over a period of six weeks, and a recent examination shows stomach normal in size and furthermore the indications are that the improvement will be permanent.

Case 3. Mr. K., age 43, German, laborer. This case was also of one extreme dilatation like the first, but without any signs of malignancy. The greater curvature was nearly to the pubes, while the lesser curvature was about one inch below the normal. He complained of distress around the heart, and some pain of a very moderate degree. Bloating and belching of gas was present, but no acid eructations. Appetite was good, but nearly all food disagreed. Palpatation marked. Pulse irregular and weak. Patient emaciated. No tumor anywhere. Stomach contents showed decrease in hydrochloric acid and great stasis. After about five weeks treatment the stomach was almost normal, and the patient had improved to such an extent that he felt practically well and disappeared.

Case 4. Miss B., age 18, single, school teacher. I saw this case first in July, 1902. At that time she complained of considerable pain after eating, very acute in character, lasting for several hours. Bloating and belching of gas was present, also some nausea, but no vomiting. Pain was present also during the night, generally before one o'clock in the morning.

The loss of weight was not marked, in fact the general appearance of the patient was good. The pulse varied from 90 to 130 and there was a marked difference between sitting and standing. She was afraid to eat on account of subsequent distress. Constipation was not present. A physical examination revealed greater curvature of the stomach three inches below the umbilicus. The lesser curvature being in its normal position. Stastis was extreme. A light breakfast taken at eight in the morning could be drawn at five in the afternoon, being only slightly acted upon. There was a deficiency in hydrochloric acid and a marked increase in the acids of fermentation. I treated this case for about one week, when she left for a summer resort and was gone nearly two months, returning unimproved. When she returned to me in September, I found her practically in the same condition as at first. Treatment was begun regularly at this time, and extended over a period of two months, since which time the patient had been practically free from all trouble, with the exception of two or three attacks of pain after indulgence of undigestable food.

Case 5. That this trouble is not a respector of persons will be shown by the following case, this being a child six years of age.

She came to me with the history of vomiting occasionally, the food having remained in the stomach for two or three days. She had all the symptoms accompanying a condition of this kind, but there was no loss of weight, and no decided pain. On examination the greater curvature of the stomach was found just above the pubes, while the lesser curvature was normally located. While there was a slight subacidity the fermentative process was not as great as should be expected with the amount of stasis present.

Treatment was begun lasting for about five weeks, when the patient to all intents and purposes relieved, the mother decided that no further treatment was necessary, which proved correct for at the present time she seems to be in good health.

Treatment.—The treatment of this condition may be classed under three heads, viz:

1st. Dietetic.
2d. Medicinal.
3d. Mechanical.

The first and third of these are the most important, as to the second very little medicine is necessary. The dietetic treatment

will be considered first, and under this head I have made the following subdivisions.

1st. The proper method of feeding the patient.

2d. The correct time of feeding.

3d. What foods to give and their proper preparations.

Under the first I will say I have tried three methods of dieting.

1st. The one commonly used and advocated by the German physicians of giving small quantities of food oft repeated.

2d. The full feeding of the patient depending on the tube to clear away the residue.

3d. The feeding of one or two meals a day.

The first of these I have tried conscientiously for some time and discarded as unsatisfactory. I found that it kept the stomach in a constant state or turmoil and gave little chance for relief during the day. It seemed to me simply to increase the distress of the patient. In a few cases it appeared to maintain a constant bloating and distress, seldom giving the patient a chance for relief. Also, in drawing off the contents at evening, I was surprised at the amount of decomposed material which came away. I am fully aware in deciding against this method of feeding, that I am going contrary to the generally accepted plan and will be censured by a good many physicians, but I am free to confess that the results obtained from it are not what I should like to have.

In attempting the second method, I soon found it impractical as it kept the patient constantly in distress. The motor power never being sufficient to expell within the proper time any considerable portion of the food, and the task of keeping the stomach clean, was a very unpleasant one to myself, as well as to the patient. This was tried on two patients only, and was discarded without any further consideration. Following this the third method was adopted viz: The feeding of one or two meals daily. With this I have obtained my best results. In the beginning of severe cases, it is well to only give one full meal a day. In the milder cases, where the stomach is able to handle more of the ingesta, one very light meal can be added. In this way sufficient nourishment can be supplied.

In the cases where one meal only is given, it is usually a generous one, and after the first day or two no difficulty will be experienced, as it will suffice in most cases to appease whatever hunger is present. As has been seen the loss of appetite in the majority of cases is one of the main symptoms, and for the time being aids us at this stage of the disease in our treatment. By this method the stomach has plenty of time to take care of the ingested food, and for absolute rest, which is not obtained in either of the other conditions.

2d. The correct time of feeding. In my judgment after repeated observations the best time for eating when only one meal is given per diem, is about three or four o'clock in the afternoon. The reasons, therefore, are as follows:

1st. By feeding at this hour, the stomach has an opportunity to do the major portion of its work before the patient retires for the night.

2d. If fed in the morning, the patient must pass through the entire day without anything to sustain strength, which is obviated by taking nourishment at the time indicated. If two meals a day are permitted, the second consists of a very light breakfast, about eight or nine o'clock in the morning.

3d. What foods to give and their proper preparations. This is an important question. I will pass over the giving of liquid foods except that of milk with just a sentence. I have found the same as all others who have studied this condition, that liquids are not acceptable to the stomach and consequently interdicted.

Milk, when predigested, is fairly adaptable, and in certain cases I use it quite freely. The selection of solid or semi-solid food depends to a certain extent upon the chemical analysis of the stomach contents. Of course, if the hydrochloric acid is in excess, and this is rare, we have no difficulty in selecting the proteids and albumens such as meats and eggs. The meats should be finely ground or scraped. The blood meat is generally

given rare. Of the other meats permissable, I have had quite marked success with very well roasted pork finely shreded before giving.

But as more often happens should the hydrochloric acid be decreased the task of selecting the diet is much harder. In some of these cases I have gone through almost entire list of edibles indicated only to find that none agreed.

The usual diet given consisted mostly of toast, small amount soaked in milk, or purees of rice and barley and oatmeal. Ice cream is generally accepted in all cases. In milder forms certain vegetables are permitted only when cooked almost to a pulp. Spinach is especially useful owing to its laxative effects. Aside from this I find that baked potatoes will agree when others will not. Add to this asparagus, the tips only, peas and string beans cooked almost to a pulp and the limit is about reached.

2d Medicines.

Few medicines are useful here aside from a tonic, preferably a bitter one, such as strychnine or nuxvomica. Waugh advocates the use of pilocarpin and berberine. As to its efficacy I am unable to give any definite information.

Antiferments, I have tried without results especially in the more advanced cases.

3d Mechanical.

The mechanical methods constitutes the principle part of the treatment. Under this head comes electricity, massage, gymnastics, etc. Electricity has proved unsatisfactory, although it seems I have obtained some help with the high frequency current in one or two cases.

There are several instruments on the market for the giving of intragastric massage, as yet I am not convinced as to their adaptability or efficacy.

Gymnastics.

This method is the one on which I depend the most, and consists of the alternate distention and contraction of the stomach by means of heated air passed into the stomach through a double tube, thus allowing it to fill and escape rapidly. This has a very stimulating effect upon the muscle wall, thereby reducing the dilatation.

Lavage.

In conslusion just a word regarding lavage. I cannot help but feel that this procedure is sometimes over done. I will admit that some of these cases need irrigation once or twice daily for a certain period, but judgment should be used, and the ordinary cases should not be irrigated oftener than two or three times a week.

Frequent irrigation can be obviated by the cleansing of the stomach through a double stomach tube with compressed air. Spraying of the stomach with medicines is best done immediately after the cleansing by air or water.

103 State st.

Discussion of Dr. Mack's Paper.

Dr. John C. Cook, Chicago:—I feel that a paper that covers so much ground, and that is so well presented, ought not to go without some word of commendation. I wish to call attention to one of the etiological factors not ordinarily taken into account by the profession, one that occurs in childhood. It has become the custom to feed children artificially, and it has been observed that many of these children so fed suffer from dilation of the stomach; more often than those that are fed naturally. That is quite reasonable. Nature provided that the baby's stomach should work and for that reason milk curdles in the stomach, but when they are given predigested food, as is the custom at the present time, the stomach has no work to do, and no contraction takes place; therefore, there is no development of the muscular coats of the stomach, and, hence, the early beginning of dilatation: the muscle is weak and cannot resist the work that the stomach is called upon to do later.

This is very clearly shown by making a comparison of children and calves. Mother's milk curdles in small, flaky curds, that are passed easily through the pyloric valve, without any very great contraction of the stomach. Cow's milk curdles in large chunks in the calve's stomach and produces a greater muscular contraction, which we know is necessary for the future use of the calf's stomach. Nature provides for these things in the beginning and we should take note of it. If the Doctor will take his histories carefully, he will find that many of these cases occur in children who were fed artificially.

I wish to endorse what the Doctor said about the long periods of rest, long intervals between feeding. That is the best thing for the stomach, and, as a rule, that produces the best results in treatment. The stomach must have a certain amount of rest. I believe that authors will not agree with him as to the value of lavage, that it is a better remedy in the hands of some workers than, apparently, it was in his.

ACUTE INFANTILE MIDDLE-EAR INFLAMMATION.

BY WILLIS O. NANCE, M. D., CHICAGO.
Oculist and Aurist to Cook County Hospital and Assistant Surgeon to the Illinois Eye and Ear Infirmary.

In directing your attention briefly to the subject of acute otitis media in infancy and early childhood, the writer desires to particularly emphasize four points of especial interest in its consideration, viz.: (1) the frequency of the process, (2) the close relationship existing between acute middle ear inflammation and some of the common infantile disorders other than the exanthemata, diphtheria, and influenza, (3) the diverse symptomatic phases of the disease in adult and in infant life, and (4) the necessity of early recognition of the ear trouble and its rational management.

It is certainly unnecessary to dwell at any great length upon the clinical significance of otitis in general. Every practitioner recognizes the grave influence that middle-ear inflammation exerts upon the function of hearing, and in certain instances, by virtue of anatomical contiguity upon the life of the patient. In addition, if the theory in the light of modern observation is to be accepted there is another element affecting the general systemic economy that is deserving of consideration.

That otitis is of sufficient frequency to merit careful attention is demonstrated by the statistics of Ponfick, Netter, Kossell, and others, who, during the past decade have elaborated much on this feature of the subject. Ponfick's report is of especial interest. In the autopsies of 100 children dead from various diseases, only ten of which were known to have been suffering from ear disease, he found the tympanic cavities and their contents normal in only nine. Barth records the examination of 600 children seen during life and also post-mortem and reports 80 per cent as having lesion of the middle-ear. Kossell in 108 infantile autopsies found the middle ear diseased in 85.

Admitting these figures to be the result of careful and painstaking observation and scientific research, one cannot but be impressed with the more general frequency of otitis media infantum than has been the accepted belief of the profession in the past. These statistics appear to demonstrate clearly and positively that at least three-fourths of all infants and young children at some period of their existence suffer from middle-ear disease. If these views are to be accepted as orthodox, the subject for this reason, if for no other, resolves itself into one of decided interest.

Again, from a clinical view-point of modern development, the intimate relationship existing between acute otitis and certain infantile diseases affecting the general nutrition, is to be considered. Hartmann, a decade ago, called attention to the concomitant affinity of acute purulent middle-ear inflammation and gastrointestinal disturbances, the former in relation to the latter in the light of causative factor. His initial contribution to the subject, and a corroboration of his views in a second paper published in 1899, point out that latter rise of temperature and reduction in weight in infantile intestinal affections necessitate examination of the ears for presence of inflammation. It will usually be demonstrated that the tympanic cavities contain pus, which, on evacuation by incision of the drum-membrane, the temperature falls, the digestive disturbances disappear, and the bodily weight increases. Hartmann's observations have been confirmed, among others, by Ponfick, who noted that the faeces became normal in cases of intestinal disturbances in infants in the first and second years, following perforation of the ear-drum. The writer has likewise observed the same phenomena in two cases recently in which he had incised the membrane. Ponfick further points out the close connection between these two conditions by citing the autopsies on 35 children dead from gastro-enteritis—a part of the series mentioned in the early part of this paper—of which middle-ear inflammation was demonstrated in 33. His explanation of the theory is that the intestinal process is due to the resorption of toxins from the exudate in the tympanic cavi-

ties, which view Hartmann considers quite likely, "since all purulent affections in infant life lead to gastric disturbances."

The acceptance of Hartmann's theory makes necessary the careful examination of the middle-ear in those particular cases of gastro intestinal maladies presenting symptoms to which he especially alludes. Besides gastroenteritis and its allied processes various observers have called attention to otitis media acuta as a frequent accompaniment of broncho-pneumonia, which feature is a not unimportant one, and demands proper consideration.

The symptomatology of acute infantile otitis media presents certain characteristics so different from those signs usually recognized in adult otitis as classical, as to require more than passing notice. In the first place, as is well known, little dependence can be placed on the symptom of pain in infancy, at least up to the eighteenth or twenty-fourth month, the fretfulness or even continued crying is apt to be attributed to distress in some organ far remote. Local tenderness on pressure about or behind the ear is almost as uncertain, and it is well to take cognizance of this fact, as its importance as a sign in adult otitis is generally recognized. The appearance of discharge in the external meatus is naturally positively diagnostic, yet the fact must not be overlooked that, unlike in cases of adult middle ear inflammation, the drum-membrane in infants is much less liable to perforate. This very important fact is due to the anatomical difference between the adult and infantile ear; the Eustachian tube of the latter being so much shorter and wider than that of the adult, as to most generally drain the contents of the inflamed tympanic cavities into the nasopharynx instead of their being closely confined in the limited boundaries and finally bursting through the weak drum-membrane. Besides this, and for the same reason, bulging of the membrane, so common in adult cases, is unusual in infants. Likewise different are the other general appearances of the drum-membrane. In infants, one finds, instead of the redness and thickening so typical of adult otitis, usually an opaqueness or turbidity of the drum-head only and on this appearance, and on this alone, are we frequently called upon to make a positive diagnosis. The writer has observed this phenomenon so often that he has learned to look upon it as almost pathognomonic of the middle-ear process.

The examination of the infantile ear is by no means easy to the in-experienced, or at times, to the expert, yet one can, and must, if he does his full duty to the patient, overcome the obstacles that beset his way. Gentleness and firmness in the manipulation are the keynotes to success in the undertaking. There need be absolutely no pain if the maneuver be properly conducted. The patient should be securely held in the upright position by an assistant. A head-mirror, a narrow speculum, and cotton-applicators are necessary adjuncts. Cerumen and epithelial scales are easily removed. The auricle should be drawn downward and outward, the examiner looking upward, instead of pulling the lobe upward and backward in the adult. It must be remembered, also, that the position of the drum-membrane differs in infancy from that in adult life in that its superior portion lies more horizontal to the upper wall of the meatus. The land-mark by which a positive examination is made is the prominent white short process of malleus; this should always be brought to view or the examination cannot be said to have been thoroughly conducted. Opaqueness or turbidity of the membrane may be considered as quite diagnostic of middle ear inflammation.

The treatment of acute otitis media in infancy and early childhood may be briefly dismissed. Palliative measures are of little avail, and procrastination after a positive diagnosis has been made, is unsafe. The common error and danger of waiting for the membrane to rupture itself has already been alluded to. Instillations of sweet oil, laudanum, solutions of cocaine, and the like are suggested only to be condemned. Anodynes are contraindicated and their employment is dangerous. Early incision of the drum-membrane is rational treatment, and its performance is along the lines of recognized

scientific surgical teaching. The middle-ear cavity is drained of its pyogenic contents, suffering is relieved, constitutional disturbances disappear, and the likelihood of intracranial complications minimized. Moreover, when performed early, the chance of early cessation of the discharge is improved. In the incision of the membrane, the opening should be free; a long incision furnishes ample drainage, and the wound heals as rapidly as if a shorter one had been made. A general anaesthetic is necessary for the operation; ethyl chlorid has proven so eminently satisfactory in the writer's recent experience that he now employs it to the exclusion of all others. After evacuation, a gauze wick drain is employed, and the meatus is carefully cleansed daily.

To recapitulate: (1) Acute infantile otitis media is an exceedingly frequent process, and often unrecognized; (2) the intimate relationship between this condition and gastrointestinal disturbances necessitates an examination of the ears in those cases of the latter when accompanied by loss of weight and latter rise of temperature (Hartmann); (3) the symptoms of adult and infantile otitis differ materially; turbidity of the drum-membrane may usually be demonstrated in the latter; (4) examination of the infantile ear requires a considerable degree of dexterity, and unless thoroughly conducted, is useless; (5) early incision of the tympanic membrane after positive diagnosis of acute inflammation is rational treatment.

Discussion on the Papers of Drs. Nance and Pierce.

Dr. Richard J. Tivnen, of Chicago.—Mr. President: I enjoyed the paper of Dr. Nance very much indeed. It seems to me it is given to few men to be able to say a great deal in a few words. I believe, however, that my friend, Dr. Nance, has succeeded very well in doing this.

Cases of infantile otitis media should command a great deal of connsideration. The limitations of Dr. Nance's paper were well taken. I feel that it was necessary for him to define at the outset the boundaries and scope of the subject which we are to discuss. Inasmuch as the field is so wide and the theories are so varied, I feel he has done well to emphasize the more important points in the manner in which he has done.

First, in relation to the frequency of the process. While the percentage which he has mentioned seems large on a superficial consideration, yet I believe it can be sustained. The percentage of 75 or 80 per cent. seems somewhat high, and yet from the fact that we so often find unrecognized cases among infants, and are called so often to treat the effects of these diseases, I feel that this percenetage can be reduced. In any event, reference to such high mortality statistics has a practical bearing, and we as physicians should be more on the lookout for such troubles than it is customary for us to do.

I wish to refer to another point, namely, the association of this disease with gastro-intestinal disorders, in the light the Doctor spoke of it. He referred to otitis media as being a causative factor. That seems to me, in a measure, a somewhat new view of the matter, and yet when we consider the profound septic conditions that result from the absorption of pus in any portion of the body, we can readily understand how suppurative attacks in the middle ear with absorption of the septic matter will produce general constitutional effects sooner or later. It seems to me that point is well taken too in the light of general results of sepsis.

A third point is with reference to the symptomatology of infantile otitis media differing from the symptomatology of this disease in the adult. I think this point was clearly brought out by Dr. Nance, and it is an exceedingly practical one.

The importance of examination of the ear as a general routine measure cannot be emphasized too much. Having been in general practice myself, I am going to make a confession as well as criticism, namely, that there is an inclination to neglect the routine examination of the ear. I believe we should accustom ourselves to the habit of examining the drumhead in cases of infantile disorders, believing that we would be amply repaid for any efforts made in this direction.

Dr. Norval H. Pierce, of Chicago.—I did not hear Dr. Nance's paper in full, but caught enough of it to conclude that Dr. Nance believes that a smoky condition of the drumhead, with pain, is a sufficient indication for incision. Am I right?

Dr. Nance.—Yes.

Dr. Pierce.—I believe that paracentesis with incision of the drumhead has been greatly abused. When we consider the fact that the middle ear or tympanic cavity and the antrum and pneumatic cells are inseparably connected, we must know that whenever the tympanic cavity is involved in an inflamation, the attic, the mastoid antrum and pneumatic cells of the mastoid process are also implicated, and incison of the tympanic membrane may only release the fluid contained in the middle ear or tympanic cavity primarily, and, of course, secondarily, a portion of the fluid which by gravity may escape through the additus of the tympanic cavity from the mastoid cells. I regard, therefore, bulging of the tympanic membrane as the one principal indication for incision of the tympanic membrane.

The number of children I have seen with

pain and a smoky tympanic membrane, with more or less loss of the anatomical contour of the middle ear, of the anterior and posterior bones, which have recovered without paracentesis lead me to believe that very few of them require paracentesis. When we resort to paracentesis, we open another source of invasion. We must remember secondary invasion through the external auditory canal, and if we substitute for incision a ten or twelve per cent. carbolic acid solution, that is, a solution contaning forty-eight grains of carbolic acid, five drops of acetic acid, a dram of alcohol, and enough of it to make an ounce, into which is dipped a strip of gauze one-quarter of an inch wide, which is packed well against the tympanic membrane and held in place by collodin, we will find that these patients get along nicely; the pain will cease almost immediately, and the disease is brought to an end in three or four days, in the great majority of cases, without surgical intervention.

Dr. William L. Ballenger, of Chcago.—I did not hear Dr. Nance's paper, but I caught the import of it from the discussion. I think there are things to be said in favor of paracentesis as well as against it. Personally, I do not believe there is so much danger attached to incision of the drumhead as Dr. Pierce would have us believe. On the contrary, I do not believe it is good practice to incise the drumhead simply because there is haziness of it. I have in some cases practiced simple incision where there was bulging of the drumhead, but have never done it for simple haziness of it. It is true that around the border of the drumhead there are numerous blood vessels, sinuses and lymphatic spaces through which infection may occur, but I think clinically we have very rarely seen any great harm come from it, even after the development of a distinct septic process in the middle ear, so that theoretically I would not be opposed to incision for a cloudy drumhead, upon the grounds mentioned by Dr. Pierce, but I am opposed to it because I think it is needless to make an incision that early.

As to the method of treatment by carbolic acid and glycerine solution, there are things to be said against it. Quite recently two or three Eastern men, whose names I do not now recall, have called our attention to the evil effects of the use of carbolic acid in this way. Carbolic acid in the strength mentioned by Dr. Pierce is an irritant. It excites round cell proliferation, which may be so permanent as to remain and form a fibrous thickening of the drumhead at a later period, hence the use of carbolic acid and glycerine for this purpose has its objections. We are liable to impair by its use the usefulness of the drum membrane, and thus we should be careful even in the use of so simple a remedy as a twelve per cent carbolic acid solution in glycerine, in the combination that has been mentioned.

We know in paracentesis the tendency is toward very rapid healing, and the edges of the wound become rapidly agglutinated, so that the danger of infection is very remote, especially if the incision is limited to the membrane proper, and does not extend to the margin of the drumhead.

I was very much interested in Dr. Pierce's remarks, but I am not wholly convinced that he takes exactly the right view. I have seen cases, for instance, of thrombosis where there was no absolute evidence of a septic clot being present in the sinus, but did not wait twenty-four hours. The septic symptoms are usually so pronounced that I would rather take my chances in these cases of incising the sigmoid sinus and obliterating it than to wait twelve or twenty-four hours for a culture to be made. I recall a case in which two or three physicians were called in consultation. The temperature ranged from 104 degrees down to normal for a number of days. There were pronounced rigors. There was not the doughy texture that Dr. Pierce describes, but in which the portions of sinus exposed were soft. Upon opening the sigmoid sinus we found in the upper portion of it a large septic clot, and in the lower portion of the jugular bulb another large clot, the space between the two being soft and the membrane appearing almost normal. We found also in connection with this case a perisinus abscess or suppuration of the most putrid type. The removal of the clots and examination proved that they were also septic, and had I left the case in this condition for twenty-four hours longer I believe it would have been fatal to the patient. As it was, the patient barely escaped a prolonged illness, and made an ultimate recovery. So I simply mention the fact that there are exceptions, although in the main I would agree with what Dr. Pierce has said, that it is not wise to rashly enter the sigmoid sinus without fairly positive indications, that is, unless we find a septic condition therein.

Dr. D. N. Eisendrath, of Chicago.—I would like to ask Dr. Pierce, from the standpoint of a general surgeon, why it would not be a good plan, in case there is a suspicion of thrombus formation in the sigmoid sinus, to make an exploratory puncture of the sinus, and then examine the blood microscopically, which can be done within a few minutes, which will either show the absence or presence of pus microorganisms, so that too great a length of time may not elapse between the primary mastoid operation and the operation upon the sigmoid sinus? So much more can be gained by this more accurate procedure than by waiting to determine whether or not the mastoid is sufficient.

Dr. Nance (closing the discussion on his part)—I desire to thank the gentlemen for their favorable criticisms of my paper.

The remarks made by Dr. Tivnen emphasizing the necessity of routine examination of the ears in certain cases are well taken, and this point cannot be too thoroughly emphasized. Some one has said that from the time of Hippocrates down we, as physicians, have examined the tongue as a routine method in our examinations, without learning much of clinical value, and yet there are cases of middle ear trouble which go on and result oftentimes seriously, in

which no examinations of the ears have been made. The general practitioner should be qualified by a certain amount of experience at least to be able to examine the drumhead, and to examine patients' ears as a routine measure.

With reference to the remarks made by Dr. Pierce pertaining to the question of treating these cases palliatively by carbolic acid and glycerine, or by other methods, or by incision of the drum membrane, I think in the main we thoroughly agree in that regard. The point made in my paper of urging incision of the drum membrane had reference to extreme cases, and not as a routine method, where there was a turbidity of the membrane.

The point I desired to make was this, that one had better not be too conservative along these lines. Undoubtedly Dr. Pierce has seen a great many more of these cases than I have, yet in the experience I have had I can recall a few where I am satisfied the physicians in attendance had been entirely too conservative, where the process had gone on from bad to worse, until paracentesis or incision would have been of very little avail.

Dr. Ballenger has so well answered the other statements made by Dr. Pierce that I do not think it is necessary for me to make any further remarks along that line.

Dr. Pierce (closing the discussion)—After using carbolic acid and glycerine in combination for ten years, I can assure the gentlemen of the Section that there is not the slightest danger in its use for a prolonged time. Carbolic acid and glycerine are not at all irritating; neither are carbolic acid and alcohol irritating. This combination does not thicken the drumhead; it does not tend to form adhesions between the drumhead, or cause ankylosis of the ossicular chain. It is a method of distinct benefit, one far superior to any other known method that I know of in treating the first stages of acute otitis media, either in infants, in children, or adults, and it is a method that can be put in the hands of you gentlemen who have not access to a skilled otologist at all times. If after the use of carbolic acid and glycerine, pain and fever continue, then the indications are at once obvious. You should have a consultation, or if you are skilled enough yourself, proceed with the surgical treatment of the disease.

With reference to Dr. Ballinger's remarks regarding exceptions, I do not place myself in the light of one who tries to place before you laws without exceptions. My paper was for the purpose of protesting against applying to the sigmoid sinus surgical principles which a good many of the Eastern Aural surgeons apply to the sigmoid sinus, and I am convinced that what I have enunciated is sound practice, namely, to wait in those cases of pyemia associated with early suppuration, in which there are no obvious local symptoms of a thrombus in the sigmoid sinus. That there are exceptions, I grant, but the exceptions make the rule.

With reference to the remarks of Dr. Eisendrath, the idea of exploratory puncture of the sigmoid sinus was touched on. It may be done, but as we make our puncture in a septic field, it is not without danger. By watching the patient for twelve or twenty-four hours, we get the typical reaction of sepsis, and in the majority of cases there will be plenty of time to thoroughly explore the sigmoid sinus, and if necessary, the jugular bulb.

THE SCIENTIFIC STRUGGLE TO CURE PULMONARY TUBERCULOSIS IN THE UNITED STATES SINCE 1882.*

BY HOMER M. THOMAS, A. M., M. D., CHICAGO.

The cause of consumption was discovered by Koch in 1882. Previous to this there was no etiological basis of treatment. Treatment of symptoms was the rule; cure of the cause unknown. Our therapeutic resources were mainly directed in the control of cough, night sweats, diarrhoea, gastric disturbances and efforts to maintain bodily weight. With the dawn of a definite etiological entity we seemed ready to emerge from the darkness of the past into the illumined pathway of the future. Thousands of scientific minds were carried forward by an irresistible enthusiasm for new discoveries.

The distinguished Koch, whose deep scientific research has made his name immortal was among those to suggest a remedy for the control of the disease. No bacillus received greater study. Its biological and pathological characteristics are known throughout the scientific world. We all stood upon a common ground of knowledge of the cause of consumption. Some of the brightest minds made it their life study to seek out a cure for this most prevalent of all diseases. Twenty-three years have now passed in our study of this great problem. It is my purpose to attempt to bring in review the various methods of treatment suggested by many medical writers of this country. This compilation embraces all that has been found accessible in the great libraries of Chicago. The compilation is confined to the methods suggested by American physicians. The chief exception to this is in that suggested by Koch. All the treatments have either originated here or are

*Read before the Chicago Medical Society, Oct. 12, 1904.

a modification of those suggested elsewhere.

It is probably true that this comprehensive resumé embraces the crystalized consensus of scientific research up to the present.

TREATMENTS SUGGESTED.

1. External stimulation by means of application of double jacket..... 1
   T. J. Mays.
2. Intrapulmonary injections of various remedies..... 6
   T. J. Whittaker, John Blake White, J. P. Loomis, C. W. Ingraham, H. A. Hare, J. O. Hirschfelder.
3. Antiseptic inhalations by compressed vapor..... 7
   Beverly Robinson, G. W. Johnson, E. O. Otis, George Durand, Austin Flint, Homer M. Thomas, P. J. H. Farrell.
4. Pneumatic cabinet treatment..... 1
   Rollin Brown.
5. The Bergeron Method. (Sulphuretted hydrogen.) 2
   A. G. Roeth, W. J. Herdman.
6. Climatic and Dietetic 10
   Trudeau, C. W. Ingraham, E. L. Shurley, G. O. Place, S. S. Cohen, Karl Von Auck, Wm. M. Beggs, E. O. Hershey, L. Brown, H. Williams.
7. Vaporized medicaments within the respiratory tract..... 1
   Homer M. Thomas.
8. Vaccine virus from cow 1
   J. H. Tindale.
9. Insufflation of powders into the lung. 1
   H. J. Lobinger.
10. Serum treatment (Koch) 5
    Jos. Jones, Wm. Osler, Solly, A. C. Abbott, Koch.
11. Watery extract of tubercle bacilli. (Von Ruck) 1
    Von Ruck.
12. Tuberculocidin (Von Ruck) 2
    Von Ruck, Chas. Dennison.
13. Shurley Gibbs treatment 3
    Shurley Gibbs, E. F. Ingals, Homer M. Thomas.
14. Tuberculocidin (Klebs) 1
    Klebs.
15. Wells sulphide of lime 1
    E. F. Wells.
16. Hydronaphthol (Carl B. Smith) ... 1
    Carl B. Smith.
17. Boardman method 1
    W. S. Boardman.
18. Nuclein 2
    R. W. Wilcox, V. C. Vaughn.
19. Open Air treatment 1
    R. H. Babcock.
20. Immunized horse blood serum 1
    Paul Paquin.
21. Antithisin 3
    F. E. Waxham, H. Longstreet Taylor, Fisch.
22. Creosote 2
    J. R. Conway, J. E. Cobb.
23. Carasso treatment 1
    De Laney.
24. Hubbard Mitchells treatment 1
    Hubbard Mitchell.
25. Maragliano serum 1
    Francisco Carlucci.
26. Aseptolin (Edson) 1
    Cyrus Edson.
27. Iodoform inunction or Urophen ... 1
28. Oxytuberculin 1
    J. O. Hirschfelder.
29. Churchill's method 1
    T. Blank.
30. Topical applications 2
    G. A. Evans, J. Lindley Barton.
31. Ingraham's method 1
    C. W. Ingraham.
32. Autopneumatic differentiation (Weaver, Chicago) 1
33. Nitrogen gas (J. B. Murphy) 2
    J. B. Murphy, A. F. Lemke.
34. Urea in treatment of tuberculosis.. 1
    H. Harper.
35. Sodium cinnamate, intravenous 1
    H. Guttman.
36. Antistreptococcic serum 1
    S. C. Bonney.
37. Subcutaneous injections 3
    J. P. Loomis, C. W. Ingraham, J. O. Hirschfelder.

PERCENTAGE OF RESULTS.

Stage of Disease	Result.	Physician Reporting.	No. of Cases.
1st...	80% recovered	Dr. T. J. Mays	55
1st...	20% arrested		
2nd..	40% improved		
3rd ..	27% died		
2nd..	Conditions not markedly changed	Dr. T. J. Whittaker.	5
1st...	8 recoveries	Dr. G. A. Evans	10
3rd .	2 deaths		
.....	No results	Dr. John B. White.	11
1st...	Steady and perceptible improvement	Dr. A. G. Roeth	10
1st...	42 recovered	Dr. Karl Von Ruck.	347
3rd ..	55 recovered		
1st...	105 died		
3rd ..	145 died		
1st...	Improved	Dr. J. H. Tindale...	6
2nd..	Markedly improved		
1st...	Improvement	Dr. H. J. Lobinger.	26
.....	No results	Dr. G. W. Johnson.	40
.....	No results	Dr. William Osler..	28
1st...	95 improved	Dr. Solly	141
2nd..	46 worse		
1st...	13 got well	Dr. Shurley Gibbs..	27
3rd ..	9 died		
2nd..	4 worse		
.....	1 unheard from		
3rd ..	14 died	Dr. E. F. Ingals....	42
1st...	12 far advanced		
1st...	8 improved temporarily		
1st..	8 disease arrested		
1st...	14 cured	Dr. Klebs	85
1st...	45 improved		
1st...	14 not improved		
3rd,..	2 died		
1st...	14 cured	Dr. Klebs	130
1st...	59 improved consider'bly		
1st...	34 somewhat improved		
2nd..	23 not improved		

KOCH'S TUBERCULIN TREATMENT.

Result.	Physician Reporting.	Total No. of Cases.
First Stage, 309 Cases—	Dr. Von Ruck	1339
—— improved		
48 apparently recovered		
3 disease arrested		
Second Stage, 139 Cases—		
73 recovered		
43 disease arrested		
23 improved		
Third Stage, 117 Cases—		
41 recovered		
24 improved		
23 arrested		
29 died		
Dietetic, Climatic, Hygienic, 1030 Cases—		
35.5% of 379 recovered		
37.5% of 379 improved		
38.0% of 348 recovered		
48.0% of 348 improved		

KOCH'S TUBERCULIN TREATMENT—*Continued*

Result.	Physician Reporting	Total No. of Cases.
First Stage—	Dr. Von Ruck	90
7 apparently cured		
4 greatly improved		
Second Stage—		
10 cured		
12 greatly improved		
First Stage—	Dr. E. O. Hershey	328
109 apparently cured		
107 recovered		
Second Stage—	Dr. Carl B. Smith	31
14 cured		
Third Stage—		
8 incurable		
9 deaths		
(416 cured, 1250 benefited)	Dr. Solly	4167
First Stage, 714 Cases—		
143 cured		
337 benefited		
First Stage, 32 Cases—	Dr. W. S. Boardman	40
14 improved		
18 not improved		
Second Stage, 6 Cases—		
2 improved		
3 not improved		
1 worse		
Third Stage, 2 Cases—		
1 improved		
1 worse		
50% improved	Dr. Paul Paquin	22
Unclassified	Dr. H. Longstreet Taylor	72
Unclassified	Dr. Karl Von Ruck	29
39 cured	Dr. Karl Von Ruck	44
6 died		
All doing badly; was forced to change treatment	Von Ruck	34
30 absolutely hopeless	Dr. Hubbard Winslow Mitchell	130
40 practically well		
60 recovery probable		
8 recovered	Dr. Hubbard Winslow Mitchell	8
Cured 10 cases	Dr. O. G. Place	10
212 improved	Dr. Cyrus Edson	216
4 not improved		
1 apparently cured	Dr. L. F. Flick	10
3 almost cured		
4 disease arrested		
2 doing badly		
11 probably dead	Dr. L. F. Flick	102
15 cured		
16 disease arrested		
15 some improvement		
49 died		
11 cured	Dr. J. O. Hirschfelder	65
29 improved		
2 impr ved some		
8 unchanged		
7 worse		
5 died		
45 unclassified	Dr. T. Blank	45
First Stage—	Dr. Karl Von Ruck	182
26 recovered		
17 improved		
Second Stage—		
26 recovered		
11 improved		
Third Stage—		
7 recovered		

KOCH'S TUBERCULIN TREATMENT—*Concluded.*

Result.	Physician Reporting.	Total No. of Cases.
First Stage— 2 recovered. 3 almost recovered Balance greatly improved...	Joshua Lindley Barton	12
16 cured 36 much improved 6 slightly improved 6 unchanged 1 worse 5 died	Dr. J. O. Hirschfelder	70
First Stage, 21 Cases— 9 cured Second Stage, 14 Cases— 5 cured Third Stage, 15 Cases— No cures	Dr. C. W. Ingraham	50
1 died 2 improved 7 worse	Dr. F. E. Waxham	10
First Stage— 10 cured Second Stage— 2 cured Third Stage— 16 cured 7 improved 5 died 2 unreported	Dr. W. H. Weaver	56
Third Stage— No cures Second Stage— 6 improved First Stage, 37 Cases— Nearly 80% cured	Dr. W. H. Weaver	46
Unclassified, 52 cases	Drs. J. B. Murphy and A. F. Lemke	52
Unclassified, 350 cases	Drs. J. B. Murphy and A. F. Lemke	350
First Stage, 20 Cases— 20 recovered Second Stage, 37 Cases— 25 recovered 7 improved 5 improved Third Stage— 3 recovered 9 improved 7 improved 2 died	Dr. Karl Von Ruck	78
First Stage— 6 cured Second Stage— 3 improved	Dr. H. Harper	9
1 cured 10 improved 14 no results 8 deaths	Dr. H. Guttman	33
Unclassified, 25 cases	Dr. S. C. Bonney	25
1000 cases— 355 cases well 62 arrested 43 relapsed 53 chronic 35 dead 258 cases— 172 cases well 52 dead 563 cases— 140 cases well 283 dead 225 cases— 40 advanced 200 dead	Dr. Lawrason Brown	1500

Antiseptic Inhalations—	
Cured	77
Improved	57
Bergeron Method—	
Improved	10
Climatic and Dietetic—	
Cured	1218
Improved	1632
Serum—	
Cured	904
Improved	423
Intrapulmonary Injections of Various Methods—	
Cured	86
Improved	355
Shirley Gibbs' Method—	
Improved	35
Cured	12
Internal Treatment—	
Cured	8
Improved	100

RESUME OF GENERAL RESULTS.

(Total number of cases, 10218.)

STAGES OF DISEASE.

Recovered.	Arrested.	Fatal.	Negative.
1st.....1333	1st..... 705	1st..... 137	1st..... 7
2nd.....1268	2nd..... 135	2nd.....1981	2nd..... 457
3rd..... 154	3rd..... 40	3rd..... 975	3rd..... 434

Cases reported but unclassified or unaccounted for...2592

1884. Dr. T. J. Mays, of Philadelphia, advocated external stimulation in treatment for increasing molecular and cellular motion. Controls the disease by influencing and strengthening the healthy tissues which surround the disease. Apply with a double jacket designed by the chest. Inside lining of jacket cotton wool. Lining moistened with water, heated before applying, connected with rubber tube to admit steam from boiler or stove. This acts as a hot pack. Treatment continued during 1885 to 1897. Results: First stage, 60 per cent recovered; whole number of recoveries averaged 80 per cent in first stage.

In 1885 Dr. Beverly Robinson, of New York, suggested as a treatment, first, increasing alimentation; second, continued antiseptic inhalation of creosote and alcohol from mask; third, intrapulmonary injections. Results of treatment not given.

In 1885 Dr. T. J. Whittaker, of Cincinnati, reported 5 cases treated by the intrapulmonary injection of bichloride of mercury, from 1-32 to 1-8 of a grain, daily, to a depth of

from two to four inches in the lung tissue. Patients inhale from an atomizer a solution of bichloride of mercury and common salt three times daily. His theory is that tuberculosis is a mycosis. Results: Condition not markedly changed. In 1885 Dr. H. Williams, of Boston, favored the climatic treatment of phthisis, and influence of sea air as against mountain air. The relative value of sea air and mountain air for tuberculosis is summed up as follows:

SEA AIR CONTAINS.

1. Maximum amount of oxygen and highest degree of atmospheric pressure.
2. Maximum amount of aqueous vapor.
3. Maximum amount of ozone.
4. Minimum amount of organic impurities.
5. Small quantities of saline particles, iodine and bromine.
6. More regular variations of barometric pressure.
7. Minimum diurnal variation of temperature.

MOUNTAIN AIR CONTAINS.

1. Minimum amount of oxygen lowest degree of atmosphereic pressure.
2. Minimum amount of aqueous vapor.
3. Excess of ozone.
4. Diminished amount of organic impurities.
5. Great and irregular variation in barometric pressure.
6. Maximum diurnal variation in temperature.
7. Lower in temperature.
8. Less obstruction to passage of sun's rays.

In 1886, Dr. G. A. Evans, of New York, suggested the value of local treatment with a new instrument, the object of which was, first, mechanical expansion; second, topical application instrument and air condenser forces vapor into the air passages. His mixture consisted of 10% solution of carbolic acid crystals, 5% of borax, and 18% of glycerine. He reported ten cases treated, with 8 recoveries and 2 deaths. Of these, 5 cases had pulmonary consolidation, and in 2 there was softening. In 1886 Dr. John Blake White reported 11 cases treated by intrapulmonary injection of carbolized iodine in doses of from 20 to 30 minims. No results given. In 1887 Dr. White claimed that his post-mortem findings proved, first, that the injections entered the pulmonary cavity; second, no harm was done; third, post-mortem findings demonstrated the local value of intrapulmonary injections.

In 1887 Dr. Edwin O. Otis, of Boston, urged treatment by inhalation of antiseptics by compressed air vapor. This inhalation consisted of carbolic acid, 1½ oz.; borax, ½ dram; glycerine, ½ oz., and distilled water, 4 ozs. Another formula consisted of compound tincture of iodine, 7 minims; tincture conium, 15 minims; glycerine, 4 drams; water, 4 ozs.

Conclusions: (1) Inhalations should be given three times daily, 15 to 20 minutes each. (2) Patient learns to breathe properly. (3) Correct bodily carriage. (4) There is but little difference as to what antiseptic we use. (5) In advanced cases no improvement, but sometimes amelioration of symptoms. In incipient cases, some real improvement.

In 1887 Dr. Rollin Brown, of Brooklyn, advocated a pneumatic cabinet treatment, the object of which was to convey to the site of the morbid process its chemical antidote. It was not doubted that the treatment will convey medicine to the diseased areas, but there was much doubt as to whether the remedies used constituted a chemical antidote. The antiseptic used was iodine.

In 1887 Dr. A. G. Roeth, of Boston, presented the Bergeron method, which was reported the previous year before the French Academy of Medicine by its author. This method was the use of sulphuretted hydrogen injected per rectum. It was found by experiment that this gas was afterward eliminated by the lung. Ten cases were reported in which there was steady and perceptible improvement, and amelioration of symptoms in all cases. The time of treatment was one month. Gas was administered twice daily, before meals, in the morning and evening.

Dr. W. J. Herdman, of Ann Arbor, Michigan, claimed the truth of this theory had been proved by experiment. The effects produced, first, a diminished, if not entire sup-

pression of cough; second, suppression of night sweats; third, modification in quantity and quality of expectoration, and checking of pulmonary suppuration; fourth, temperature often reduced to normal; fifth, improvement of appetite, digestion and general health, with a gain in weight. The patient sleeps better, and there is subsidence of nervous symptoms. Sixth, auscultation shows disappearance of moist bronchial râles. There is evidence of healing of lung tissue. Seventh, marked amelioration of all symptoms. (The editor of the journal of the American Medical Association says that the physician who does not try this treatment in any given case of consumption exposes himself to the charge of culpable negligence.)

In 1887 Dr. Geo. Durand, of New York, advocated the antiseptic treatment by means of an inhaler worn while up or sleeping, in which is a pad saturated with carbolic acid. He claimed remarkable results in either the recovery or marked benefit in all of his cases, except those in the third stage. In 1888 Dr. Austin Flint advocated inhalation of creosote, alcohol or chloroform, through a modified inhaler, and followed it with general hygiene, and constitutional medication.

His results were improvement in weight, night sweats, temperature, cough and expectoration.

In 1889 Trudeau reached the conclusion that the therapeutic value of hot air inhalations was doubtful. Inhalations of heated air can neither prevent nor diminish the virulence of bacteria in the lungs of living individuals when they have gained access thereto.

1889. Karl VonRuck climate—Dietetic and some general therapy. 243 cases from private practice.

Management and Climate.	Number of cases.....	Recovered.	Per cent...	Improved; still alive.	Per cent....	Died.....	Per cent....
Treated at home; early stage.	94	3	3.2	2	2.2	89	94.6
Treated at home; advanced stage	88	1	1.1	0	....	87	98.9
Sent away for climate; early stage	17	4	23 5	1	5.8	12	70.0
Sent away for climate; advanced stage	44	2	4.5	2	4 3	40	90.9
Total	243	10	4.1	5	2+	228	93.8

58 cases treated in Sanitorium in same locality without climatic advantages.

	Number of cases.....	Recovered.	Per cent...	Improved; still alive.	Per cent....	Died.....	Per cent....
Early stage	32	19	59.3	9	27.5	4	12.8
Advanced stage	27	5	19.2	5	19.2	16	61.5
Total	58	24	41.5	14	24.1	20	34.5

29 cases in special institutions in Asheville, climatic conditions favorable.

	Number of cases.....	Recovered.	Per cent...	Improved; still alive.	Per cent....	Died.....	Per cent....
Early stage	3	3	100.0	0	....	0	....
Advanced stage	26	9	38.4	5	19.2	2	7.7
Total	29	12	41.3	5	17.2	2	7.0

Therapeutic Gazette, dietetic, volume 5, 3rd, page 505.

1890. Experimental work on the penetrability of vaporized medicaments within the respiratory tract, by Homer M. Thomas. Guinea pig lungs from City Hall and from Akron, Ohio. Nitrate of silver inhalations. Dog demonstration. Human lung experiment at Cook County Hospital.

Conclusions: Nebulized medicants reach pulmonary alveoli of animal and human lung when so prepared as to be easily respirable. First demonstration of the fact. Weakness of treatment: Strong in mechanism, but weak in therapy. Will not reach tubercular foci.

J. H. Tindale, New York, treated six cases with vacine virus from a cow. Reported before Koch's report. Results: (1) Patients improved. (2) Expectoration lessened or stopped, absence of bacteria and sputum, and temperature normal.

H. J. Lobinger, New York; insufflation of a compound powder into the lungs by means of a powder inhaler, based on calcium phosphate in solution in water.

Koch's serum. Dose in adult .901 c.c., given daily until no reaction results, then .002 c.c., or even .005 c.c. results.

Patients general symptoms improved. Expectoration diminished or ceased. Patients under treatment in first stage cured. Patients with cavity, not too highly developed, improved, almost cured. Lungs with large cavities not improved. Place of injection, between shoulders in back. Pathology: Destruction of tubercle bacilli in tissues.

Dose: Small at beginning, increased if no reaction up to 35 to 40 mg. Results: No cases cured; 5 decidedly benefited. In no case did bacilli disappear from sputum. Cough reduced in frequency in all cases. Of remaining 17 cases, 9 left hospital worse for treatment, 2 died later, 7 unheard from, 4 remained stationary, and 4 slightly improved.

Food in treatment. S. S. Cohen, New York. Pathology. By tuberculosis is meant a disease of the whole system; an aberration of the nutrition. Remote causes are heredity, unhygienic surroundings, previous debilitating diseases, and improper breathing.

Treatment: Carefully prescribed, yet generous, diet, given often if digestion is good, and assimilation kept up. Especially one quart of milk, or one pint of it, and one pint of cream in twenty-four hours. Alcohol in febrile cases is a food. Cod liver oil when necessary. Water freely, especially hot, one pint before meals. Digestive apparatus is not to be burdened, yet over-feeding is the object. For those unable to be out-of-doors compressed air inhalations are of value.

1891. Patients treated at Adirondack Sanatorium, New York, or 90 per cent cured in the first stage. In 1899 Dr. Mays suggested silver nitrate over the vagus nerve. His reason for this therapeutic change was that lining lesions which are found in pulmonary consumption do not represent primary morbid changes in this disease; they are one of the series of the superficial manifestations which are fundamentally dependent upon a neurotic basis, in which the vagi are seriously involved.

He believes that the rational therapeusis rests on the nervous pathology. Injection of silver nitrate is a stimulant to arouse them from their abnormal condition. In 1903 Dr. Mays reported 55 cases treated by this method, in which 20 per cent of the number had the disease arrested; in 40 per cent there was improvement, and 27 per cent died.

1891. Koch's serum; Joseph Jones, New Orleans. On receipt of a small vial of Koch's lymph from President Harrison, for use in Charity Hospital, New Orleans. No cases treated for want of proper ones and consent of patients, and because so little was known as to the actual working of the lymph.

Experimental work, with the following conclusions: (1) Active principles of Koch's lymph appear to reside in a colloid nitrogenized compound, coagulable by absolute alcohol and in living germs, microorganisms, spores and bacilli, similar to those of tubercle bacilli multiplying in and without the living organism. (2) Potent effects of Koch's lymph introduced into the blood of healthy or diseased animals, referred, in part at least, to rapid multiplication and action of microorganisms similar to or identical with tubercle bacilli. (3) Results of chemical and microscopical examination of lymph make him exclude it from remedial agents.

1891. Antiseptic vapors. G. W. Johnson, Chicago. Vapors of oil eucalyptus, cloves, creosote, and general dietetic and constitutional treatment; forty cases showing improvement in four months; lessening of symptoms, fever, sputum, night sweats, etc.

1891. Koch's tuberculin. A. C. Abbott, of Baltimore, claims (1) its value as a diagnostic agent; (2) its action in surgical tuberculosis; (3) its value in pulmonary cases; cures in the early cases in from four to six weeks.

1891. Koch's treatment of tuberculosis. William Osler, Baltimore; 28 cases in Johns Hopkins Hospital; 22 of pulmonary tuberculosis; 3 cases of pleurisy suspected to be tubercular; 2 cases for diagnostic purposes; negative results. One case thought to be tuberculosis found to be cancerous adenitis.

1891. Solly, Colorado Springs; 141 cases treated. First stage, 62 cases; cured, 36, or 58.04%; greatly improved, 14, or 22.9[illegible]%; improved, 4, or 6.45%; worse, 1, or 1.61%; death, 7, or 11.29%.

Improved, 54, or 87.095; worse, 8, 12.90%.

Second and third stages, 79 cases. Cured, 11, 13.92%; greatly improved, 14, 17.7[illegible]%;

improved, 16, 20.25%; worse, 2, 2.53%; died, 36, 45.56%.

Improved, 41, 51.89%; worse, 38, 48.10%.

Totals: Improved or cured, 95, 67.37%; worse, 46, 32.62%.

1891. Shurley Gibbs treatment. Theory: Phthisis pulmonalis, a disease located in the pulmonary organs. An inflammatory process of greater or less extent resulting in permanent or destructive changes in tissues, accompanied by production of deleterious chemical substance which set up constitutional disturbances and exhaust vital forces. Idea to find something to combine with these toxalbumoses, or whatever they are, and arrest the disease process. To this end the author found *chlorine gas,* iodine, ammonia iodide, potassium iodide, *double salt or chloride of gold,* etc., did good service. Sodium chloride, and plus those underscored best. They must be cured. Gas liberated by lime and hydrochloric acid; air saturated with sodium chloride first, 2 dr. Seldom over 6 drams of lime, 1 to 3 drams of acid. First sitting, two minutes; later, up to twenty or thirty. Breathing through nose lessens coughing.

Effects: Seems to prevent further caseation, as seen by changes in sputum, and alteration in physical signs.

Injections: Iodine, begin gr. 1-12 daily, increase to gr. ½ or 1; then gold and sodium, gr. 1-30 to 1-20 daily up to 1-3; then diminish to 1-10 gr. Twenty-seven cases treated; no classification; general improvement and cures.

1892. Shurley Gibbs treatment. Twenty-seven cases treated; 13, or 48.14%, practically well; nine, or 3.33%, died; 4, or 14.8% worse; 1 unheard from. Of the 13 practically well, 8 have remained in Northern homes, and 5 gone to warmer climate. Thirty-two more cases reported, treatment not varied, except in dosage, adapting it to cases. January 1st to January 1st. Summary for the months ending January, 1902: So-called recoveries, 13; improved, 9; not improved, 3, and died, 7.

1892. E. F. Ingals. Shurley Gibbs treatment. Reports 42 cases; 14 received no apparent benefit; all dead now; 12 of these far advanced when seen; 14 improved temporarily, but later grew worse; 6 of these since died; 6 much improved, taken early; 8 disease arrested, of 19 per cent. Fourteen per cent, great improvement. Substitution of iodine for chlorine seemed more beneficial.

1892. Klebs, tuberculocidin. Experimental, 4 groups isolated: Albumoses, alkaloids, extracted matter, and lucin. Albumose is a curative factor, as claimed by Hunter. Koch's serum does not possess it. Derived from plasma of tubercle bacilli, not a product of inflammation. Preparation from tuberculin of Libbertz' laboratory by precipitating the alkaloids and extracting with matter.

Eighty-five cases treated; completely cured 14 cases, or 18.6%; improved, 45 cases, or 60%; not improved, 14 cases, or 18.6%; died, 2 cases, or 2.6%.

Later, reported 130 cases; 43 treated by himself; 87 by others. Completely or nearly cured, 14 cases, or 10.8%; considerably improved, 59 cases, or 45.4%; somewhat improved, 34 cases, or 26.1%; not improved, 23 cases, or 17.7%. Dose up to 500 mg. daily, then every other day large doses.

1892. E. F. Wells, Chicago. Sulphide of lime in phthisis. Three cases; dose, ¼ gr., 1 gr., three times a day; calc. sulph., 15 gr.; strychnia sulph., 1 gr.; acid arseniosum, 1½ grs.; ulmus. pulv., q.d. M. Capsules, No. 60, one or two, three times a day. Results: First, reduction of fever; and cessation of night sweats. Second, expectoration diminished in amount, and less purulent.

1893. Von Ruck. Winyah Sanitarium. Class A. Caseous softening or excavation present; complications; chances of patients considered good.

Class B. Chances of patient less favor; able; complications graver; extent and degree of pulmonary invasion greater; greater impairment of nutrition.

Class C. Almost hopeless cases; 309 cases treated. Class A, 53.2 improved. Apparent

clinical recovery in 48. Greatly improved and disease arrested, 3. Class B, 139 cases, with apparent clinical recovery in 73; greatly improved, disease arrested, 43; 23 improved. Class C, 117 cases; apparent clinical recovery in 41; greatly improved, disease arrested, 23; improved, 24; worse or died, 29. Treatment: Dietetic, hygienic, climatic, culture products; 1339 cases, including 309 reported. Koch's original tuberculin, 379 cases reported; 35.5% recovery; 37.5% improved; modified tuberculin used in 348 cases; 38 per cent recoveries, 48% improved.

Watery extract of tubercle bacilli in 612 cases; 54.2% recoveries; 36% improved. Culture products in a total of 1339 cases; 42.6% recoveries, and 40.3% improved. Without culture products, 816 cases, with 12.1% recoveries, and 31% improved.

1893. Von Ruck—Winyah San.

THIRTY-SIX CASES TREATED WITH TUBERCULIN.

Stage.	Number of cases.	Apparently cured.	Per cent.	Greatly improved.	Per cent.	Improved.	Per cent.	Slightly improved.	Per cent.	Stationary.	Per cent.	Worse.	Per cent.
First stage	6	5	83.3	1	16.7	.....	.....	.....	.....	.....	.....	.....	.....
Second stage	15	8	53.4	6	40.0	1	6.3	.....	.....	.....	.....	.....	.....
Third stage	15	0	.....	7	8.8	5	33.3	2	13.3	1	6.3	.....	.....
Total	36	13	36.1	14	38.9	6	16.6	2	5.5	1	6.3	.....	.....

FIFTY-FOUR CASES WITHOUT TUBERCULIN.

Stage.	Number of cases.	Apparently cured.	Per cent.	Greatly improved.	Per cent.	Improved.	Per cent.	Slightly improved.	Per cent.	Stationary.	Per cent.	Worse.	Per cent.
First stage	6	2	33.3	3	50.0	1	16.6	.....	.....	.....	.....	.....	.....
Second stage	14	2	14.1	6	42.8	5	35.7	1	7.0	.....	.....	.....	.....
Third stage	34	.....	.....	3	8.8	12	35.3	11	3.3	4	11.1	4	11.1
Total	54	4	7.7	12	22.3	18	33.3	12	22.3	4	7.4	4	7.4

—*Medical News*, Philadelphia. Vol. LXIII, pages 317-19.

1893. E. O. Hershey, Denver.

Climate, dietetic, hygienic; 328 cases treated in Colorado:

Cases.	Originating in Colorado.	Treated 2 to 5 years before coming to Colorado.	Treated 1 to 2 years before	Treated 3 months to 1 year before.	No treatment before.
Total	5	62	32	8	3
On road to recovery	3	26	36	19	25
Recovery	.....	4	22	11	67
Per cent of fatalities	62½	66⅔	35⅝	19.7	93
328 cases	8	92	90	41	97

1894. Hydronaphthol. Carl B. Smith, Binghampton, N. Y.

Thirty-one cases; 9 deaths; 8 incurable, but enjoying fair health; 14 cured completely. Incipient cases, look for cure in 3 weeks. Second stage, cured within five weeks—50%. Third stage, life prolonged, sometimes cures. Time of treatment, 15 months.

Theory: Acts as an antiseptic.

Results: Symptoms abate. Gain in weight, appetite, etc. Dose, 5 grs. to 1 dram.

1894. Treatment of tuberculosis by E. L. Shurley.

1. Climate. (a) warm-moist; (b) warm-dry; (c) hot (moist, dry); (d) cold; (e) altitudinous.

2. Hygienic. (a) Domiciliory surroundings; (b) clothing; (c) food, drink; (d) habits; (e) mental hygiene.

3. Medicinal. (a) hypodermatic; (b) general; (c) local (inhalations, insufflations), (external, blisters, cataplasms).

4. Treatment. Symptomatic. Hemoptysis; diarrhoea; cough; anorexia; sweating; insomnia; pyrexia.

5. Surgical.

1894. Solly.

High altitudes beneficial in (1) incipient tuberculosis; (2) imperfect expansion; (3) chronic pleurisy; (4) hemorrhagic phthisis; (5) more advanced disease, some consolidation, no excavation; (6) cases of cavity; if not large, disease quiescent.

Contraindications to high altitudes: (1) advanced age; (2) septic condition; when disease active, pyrexia constant; (3) double

cavities with or without pyrexia; (4) great irritability of nervous system; (5) disease of kidney, liver or heart; (6) diabetes; (7) great loss of pulmonary tissue; (8) emphysema; (9) tubercular laryngitis.

SOLLY'S RESUME.

	No. of Cases.	Cured.	Benefited.
All stages,	4,167	10%	36%
1st stage	714	20%	44%

HIGH CLIMATE.

All stages,	709	36½%	74%
1st stage,	350	62%	84½%

1894. W. S. Boardman, Boston.

Injection fluid:

Gold and sodium chloride (U.S.P.)	1.69 gm.
Manganese Sulph	2.44
Potassium iodide	4.62
Dilute alcohol	10 c.c.
Glycerine	
Water, q. s.	

Dissolve gold and potassium iodide separately in glycerine to make each solution weigh 25 gm.; gentle heat, if any; mix when cold.

Each 77 mg. (about 1 drop) 1 3-10 mg. (1-50 gr.) of gold and sodium chloride, and equal amount of manganese iodide.

Injections given in forearm. Subclavicular region, ordinary hypo. Initial dose, 1 gtt., with dilute carbolic acid 1%.

Theory: Gold is entrophic.

Manganese—anti-anemic—borne out.

Exact effect on the pulmonary tissue: (1) A matter of conjecture; (2) acts as a tonic; (3) inflammatory reaction about focus; (4) no injury from treatment. Good chance of improvement or cure.

RESULTS OF TREATING 40 CASES.

Subjective Results.

	Better.	Not Imp.	Worse.
First stage, 32	14	18	0
Second stage, 6	2	3	1
Third stage, 2	1	0	1

Largest dose, 24 grs.

1895. Nuclein. R. W. Wilcox, New York.

Summary: (1) Nuclein is absolutely harmless; (2) assists nature in limiting effects of bacteria invasion; (3) offers best prospects of specific remedies in pulmonary tuberculosis.

1. In 1895-96 Dr. P. J. H. Farrell, then of San Francisco, now of Chicago, conducted a series of clinical experiments to test the value of Formal-dehyde (formic aldehyde) in the treatment of pulmonary tuberculosis. An elaborate system of generators were constructed and installed in air tight wooden booths. The patient sat in the booth, the air space around the door was sealed up with adhesive plaster, the patient's eyes were carefully covered, the nostrils and lips covered with a thick coating of vaseline, a rubber tube an inch in diameter was held in the patient's mouth, and ran through the wall supplying air. There were a number of holes like those in a flute or piccolo, so that the patient could by pressing the tips of the fingers over the holes, gradually increase or decrease the quantity of Formaldehyde gas taken into the lungs and insuring a thorough mixing of the gas with air. The patients were watched through the glass in the door. The first reports were very enthusiastic, and again the world was promised a possible cure for pulmonary tuberculosis. At the end of a year the experiments were abandoned and Dr. Farrell today attributes the early success of the treatment to the fact, that the cases first selected were only in the first stage, and that they were taught to breathe properly and "recovered in spite of the treatment." Several severe hemorrhages that started while the patients were taking the inhalations brought about the discontinuance of the experiments, and a report of the failure.

1895. Nuclein. V. C. Vaughn, Ann Arbor, Mich.

Experimental conclusions: (1) Nuclein and nucleinic acid are powerful germicides. (2) The germicidal constituent in the serum of the blood is a nuclein. (3) Immunity to bacterial invasion secured by frequent injections of nuclein.

Conclusions from cases treated: (1) pulmonary tuberculosis which has progressed to the formation of a cavity, nucleinic acid from yeast will not effect a cure. (2) Even when the tuberculosis is of long standing. Great extent of tissue involved. Secondary infection with pyogenic germs has not occurred. This remedy may retard the progress of the disease. (3) In initial cases, no

secondary infection, and area involved is small. Resistance of patient good. The proper employment of this remedy may produce at least a temporary cure. Author does not know when the bacilli may return, considering the short time he has used it. Dose, 1 to 3 drams of 1-6% solution by mouth. Hypodermically, 1% up to a dram.

1895. R. H. Babcock, Chicago. Open air treatment.

Consumptives who cannot change climate should pass their days in open air, no matter what stage of the disease. Under proper precautions it can be done in all weather except when the thermometer is below fifteen above zero. Cold baths, friction to skin; rest as symptoms indicate.

1895. Paul Paquin, St. Louis.

Twenty-two cases treated by immunized horse blood serum; ten minims once daily for three months; not aided by dietetic or mental influences; improvement in all cases. Increase in weight and subsidence of symptoms. More than one-half discharged from hospital or able to work. Immunization of animal similar to that used in diphtheria.

1895. Tuberculin and its modification, anti-phthisin. H. Longstreet Taylor, St. Paul.

Seventy-two cases; tuberculin used in 2 years; 7 for diagnosis; dose 1 mg.; 7 discontinued treatment of their own accord; 19 at present under treatment; 39 to be reported; 18 third stage cases; 7 dead; 2 given long courses; 5 but a trial, treatment abandoned; 5 worse, and 1 given but a trial; 5 improved, and one greatly. Eight second stage cases, one dead, two worse, one improved, and four greatly. Thirteen early cases, one dead, one worse, and 11 greatly improved. Twenty-one cases, with a mortality of 10%, worse 14%, improved 5%, much improved 70%. Dose, 15 to 30 mg. hypodermically.

1895. J. R. Conway, New York. Creosote.

Large dose up to 20 m. after meals; always after eating; never on empty stomach. Given in capsules, with cod liver oil; proportion of one to two. Begin with 2 m. doses, increase 2 m. every fourth day to 12 m. Do not increase, but watch effect.

1895. Carasso's Method of Treatment in Detail. De Lancy, Rochester, Buffalo.

Piece of linen cloth, 10 c.c. by 2 c.c., 4 or 5 thicknesses. By means of a tape this is held in contact with the nostrils; worn day and night, except at mealtimes. Moistened four or five times daily with essence of peppermint. Nostrils greased with vaseline at first to prevent irritation. Patient takes series of six to eight breaths, holding them as long as possible. Repeated every fifteen or twenty minutes during the day.

CARASSO'S REPORT.

Internally:

Pure Beechwood creosote	8
Alcohol	550
Glycerin	250
Chloroform	20
Essence peppermint	8

Sig.: Dr. 1 every three hours, dil.

1896. 182 cases treated at Winyah Lake, Asheville, N. C. Anti-phthisis or Tuberculocidin. General climate and hygienic surroundings.

Stages.	Cases treated.	Appar'ntly Recovered.		Greatly Improved; Disease Arrested.	
		No.	Per cent.	No.	Per cent.
Early	32	26	81.	5	16.
Middle	74	26	35.1	25	33.
Last	76	7	9.	26	34.2
Total	182	59	32.4	56	30.8

Stages.	Improved.		Not Improved.		Worse or Died.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
Early	10	3.	.....	.....	.....	.....
Middle	17	23.	3	4.	3	4.
Last	11	14.4	3	4.	29	38.4
Total	29	16.	6	3.3	32	17.5

—*Therapeutic Gazette.* Dietetic. Vol. XII, page 308.

Karl Von Ruck.

Nutrition; overfeeding. 44 cases treated, with 6 deaths and 38 cures.

Author's report: 34 cases; 3 months' treatment, all doing badly; had to change treatment. (Journal of the Amer. Med. Assoc., Vol. 24, p. 840.)

1896. Hubbard Winslow Mitchell, New York.

Mitchell's fluid:

Sodic hypochlorite	7 gms.
Potass	7 "
Magnesic chlorid	1.5 "
Calcic chlorid	2 "
Hydric chlorid	2 "
Potass, sulph	1.5 "
Mag	5 "
Aqua	1,000 "

Given two or three drs., 3 or 4 times daily; always on empty stomach.

Report: 130 cases treated. 40 practically well; 30 absolutely hopeless; lung destruction too extensive; 60 cases, recovery probable; 8 other cases; all recovered in 4 to 7 months.

Pathology: Only antiseptic powers.

1896. O. G. Place, Boulder, Colo.

Report of 10 cases cured, Sanitarium, Boulder, Colo. (1) Climatic treatment; (2) no stuffing, but good food; (3) rest and wet pack to chest when temperature; (4) hydrotherapy, no alcohol.

1896. Eleven years' observation with creosote, by J. E. Cobb, Cincinnati.

No well-marked cases of tuberculosis recovered with creosote or any other drug without the very best and most favorable climate conditions coexisting.

Results: Large doses are dangerous, if long continued, for the following reasons: (1) Patient becomes more anemic after a time, and rarely recovers from it. (2) Invasion of healthy lung tissue from detached necrotic tissue; pneumonia resulting.

1896. Maragliano serum. Francesco Carlucci. Five cases improved. Preparation: Formula unknown. Uses a solution of toxic products of a virulent culture of human tuberculosis. Substance destroyed by heat-proteid, and resistant to heat-toxin. Results: (1) Serum is innocuous. (2) Causes drying up of broncho-pneumonic foci. (3) Improves appetite, increases weight, with general return of physical force. (4) Effect of serum gradual.

1896. Aseptolin. Cyrus Edson, New York.

℞

Water	97.%
Phenol	2.74%
Pilocarpine phenol hydroxide	0.0188%

Philocarpine added to produce leucocytosis and to stimulate glandular activity. Site of injection: Abdomen best for large doses, 250 m. Buttocks, etc., dose 50 m. daily; good. Iodoform, and carbolic acid spray, inhalant. 216 cases treated; 212 improved, 4 not improved, 23 of improved discharged as cured; 66 of improved will be discharged as cured; 91, no different prognosis; improvement slight; 32 cases improved only temporarily; 1 died.

1897. Iodoform inunction or urophen. L. F. Flick, Philadelphia.

10 cases reported in 1891; 1 apparently cured; 3 approaching cure; 4, disease arrested; 2 relapses; doing badly. One year later 4 had died, 3 were apparently well, and 2 disappeared from observation. In 1897, 8 dead, 1 well, 1 disappeared.

Pathology and treatment: Iodine gives the results. Even and continued influence maintained in blood by the gradual absorption of the drugs, giving off the iodine in tissues.

102 cases treated; 11 probably dead, 47 dead, 15 cured, disease arrested in 16, but still some evidence of it present. 15 some improvement; no chance of permanent cure, and 2 died of intercurrent disease.

1897. J. O. Hirschfelder, San Francisco.

"We have a right to assume that the law of antitoxins is one of general application, and that that observation which is true of one bacterial disease is true of all."

Theory, that oxidation of toxin leads to production of antitoxin. Experimentally, oxidation is produced by the action of hydrogen peroxide at 100°C.

Method. Filter a sterilized, fully grown culture of bacillus tuberculosis upon alkaline, glycerine bouillon. Add one-tenth volume of ten volume solution of $H^2 O^2$ to such tuberculin. Maintain the mixture at 100°C. for

12 hours, then add same quantity $H^2 O^2$. Repeat process until amount added shall equal that of tuberculin used. Final mixture heated for 12 hours or more. Tuberculin subjected to action of $H^2 O^2$ at 100°C. for 120 hours. NAOH added, make it alkaline; clarify and do away with excess of $H^2 O^2$. Dilutions made of known strength.

189?. Oxytuberculin. Summary of 65 cases treated; 11 cured, 29 much improved, 2 slightly improved, 8 unchanged, ? worse, and 5 died.

189?. Churchill's method. T. Blank, St. Louis. Pathology of Treatment. Supplies oxidizable phosphorus in the form of chemically pure hypophosphites. Medicine: Hypophosphites of soda, lime and quinia. Never combines them, but gives one at a time. Conditions favoring foothold of bacilli of tuberculosis. Deficiency of the phosphide (oxidizable phosphorus element). If absent, the oxygen of air inhaled is not utilized to the fullest extent. Instead of a normal bioplasmic material being produced, a broken-down tissue is substituted. Report of 45 cases, not classified. General results, cured or improved. Condition in from three months to one year.

189?. E. F. Ingals, Chicago. Antiseptic treatment. Aside from tonic and nutritive agents, antiseptics are the only agents having any power in checking the progress of the disease.

1898. Antiphthisin, Fisch.

Method: Immunizing a horse with Koch's tuberculin produces a complex serum.

1. Contains not only the toxin secreted by the bacteria, but also those contained in the tissues of the bacteria.

2. Serum would produce antitoxic bactericidal properties. Dose, minimum 1/4 c.c., increased till reaction is produced.

Results: (1) Improves general conditions. (2) Increases production of young cells in the blood. (3) Diminishes cell disintegration. Increases per cent of eosinophile cells.

Deductions: (1) Early incipiency, the disease can be cured and convalescence rapidly established. (2) In predisposed cases the serum will diminish this acceptability (?). (3) Advanced cases without mixed infection show encouraging results. (4) In cases in last stage, with mixed infections, disease receives temporary check. No cure except in rare cases.

189?. Treatment by topical applications, Joshua Lindley Barton, New York.

Aspirating syringe with endolaryngeal tube, mirror, etc.

Advantages of this local medication:

(1) Remedy applied direct to irritated mucous membrane. (2) Relieves distressing symptoms. (3) Antiseptic action of medicine marked in many cases. (4) General as well as local effect by absorption.

Twelve cases treated in one year; 6 early cases and 6 late. Two apparently recovered, 3 nearly well and others greatly improved.

189?. H. A. Hare, Philadelphia.

Injection subsutaneously, oil of cloves, M X, with French olive oil, 50 minims once daily; oil of cloves, 5 minims, t. i. d., pc., in capsules.

1898. J. O. Hirschfelder.

Summary of results of treatment of 70 cases:

Stage.	No. treated.	Cured.....	Much improved...	Slightly improved...	Unchanged	Worse.....	Died.....
Fourth	23	1	11	3	2	1	5
Third.....	29	3	19	3	4	.....	.....
Second	14	8	6	.....	.....	.....	.....
First.....	4	4	.....	.....	.....	.....	.....
Total.....	70	16	36	6	6	1	5

Well: Absence of tubercle bacilli from sputum. General disappearance of symptoms. Patient feeling well.

Conclusions: (1) System should be as nearly saturated with antiseptics as possible. (2) Given first in small doses, gradually increased to maximum. Care should be exercised not to disturb digestion. (3) Oil of cloves, five drops in capsules. Three to five times daily. Medicine always followed by a glass of milk. Increase one drop each day up to 25 to 30 at a time. Carbonate of creosote better than creosote. (4) Five to six drops, t. i. d., pc., with benefit. (5) These two the best. Eight cases reported had ad-

vantage of climate, with general improvement in all cases.

1898. Five years' successful treatment. C. W. Ingraham, Binghampton, New York.

(1) Rest when fever is over 100° F.; otherwise moderate exercise. (2) Outdoor life, thirty minutes' rest before meals. (3) Chest expansion practice. (4) Liberal diet and petroleum emulsion and cod liver oil. (5) Hypodermic use of alteratives and altero-reconstructives.

℞

Phosphorus	gr. 1-100
Iodin	gr. ½
Bromin	gr. 1-14
Thymol	gr. ⅔
Menthol	gr. ⅔

Dissolve in olive oil.

In 1895 reported treatment of 50 cases of tuberculosis. Nearly 90% cured in 21 cases treated in first stage; nearly 50% cured in 14 cases treated in second stage. Fifteen cases in third stage, no cures.

Several showed permanent improvement, and are now alive.

1898. H. P. Loomis says, in Therapeutic Gazette of October 15th, that he has seen fever leave phthisical patients and their weight increased on hypodermics of water given daily.

1898. Anti-phthisic serum. Dr. F. E. Waxham, Denver. Ten cases treated; over one thousand injections, with no abscess formation; none cured; 1 died; 2 improved; 7 worse.

Dr. Wm. N. Beggs, New York.

Reasons why serums are not successful in tuberculosis, but are in certain infectious disorders.

1. Those diseases are essentially acute diseases; tuberculosis is not.

2. Those diseases are toxemic diseases. Tuberculosis is a neoplastic disease as well as toxemic.

3. In those diseases the retrogressive changes are such as may be recovered from without loss of tissue. In tuberculosis there is always absolute destruction of tissue.

4. In those diseases bacteria are not scattered through the tissues, but have a definite localization. The source of toxin formation is single, not multiple. In tuberculosis the opposite is the case.

5. In those diseases the source of the toxin is as readily accessible to therapeutic agents. In tuberculosis the bacilli are within a neoplastic tissue, a non-vascular tissue. This means that in them the movement of tissue fluids is exceedingly sluggish, in the necrotic centers practically absent, consequently the therapeutic agents fail to reach the source of the trouble.

6. In those diseases the bacilli are usually destroyed or discharged from the organism quickly, therefore the administration of the antidote to the toxin is continued for only a very short time. In tuberculosis the tubercle bacilli are continuously for great periods of time, and the administration of the antitoxin would necessarily be as protracted.

7. In most of those diseases (diphtheria an exception) the survival of the attack confers an immunity to the individual. No such thing is known in tuberculosis.

8. Those diseases are all self-limited diseases. If the intoxication is not too great and the patient survives for a really short time, he recovers. No characteristic self-limit to tuberculosis.

1898. Antitoxin treatment of tuberculosis. Chas. Denison, Denver.

Tuberculin Preparation on Market:

1. Crude or original tuberculin of Koch. Glycerine extract of dead bacilli filtered through porcelain.

2. Klebs' modification, tuberculocidin. Crude tuberculin deprived of much of its toxins and reactionary power.

3. Antiphthisin practically the same, produced by Klebs.

4. Tuberculinum purification practically same preparation by Karl von Ruck.

5. Purified tuberculin, by Dr. Whitman, of Los Angeles, from the culture fluid in which bacilli have been grown, not standard in strength.

6. Oxytuberculin, by Dr. Hirschfelder of San Francisco. 5% tuberculin under great and protracted heat, saturated with $H^2 O^2$.

7. Koch's new tuberculin, Tr.

8. Karl von Ruck's watery extract tuber-

cle bacilli dead. Powerful in immunizing strength.

Purified tuberculin differs from antiphthisin in that it is made and concentrated with the tubercle bacilli in the fluid, and is filtered through porcelain as well as paper.

From tuberculocidin—prepared and concentrated at a low temperature, 50° C. instead at 100° C., boiling temperature, and filtered through porcelain.

(Jour. Am. Med. Assoc., Vol. XXX, p. 290.)

1899. Autopneumatic differentiation. W. H. Weaver, Chicago.

Specific action of air. First, forced inspiration; second, nebulization, and third, massage of chest.

Summary of cases: 56 cases treated; 19 first stage cases cured. 28, second stage cases. 16 cured, 7 improved, 3 died, 2 unreported.

Nine third stage cases; no cures, 6 temporarily improved. Thirty-seven cases, nearly 80 per cent cured.

1899. Nitrogen method. J. B. Murphy, and A. F. Lemke, Chicago.

"For the operation the patients are put on the table, and the skin in the neighborhood of the fifth and sixth interspaces, from the strenum to the post-axillary line, is carefully prepared, and the needle, which is an ordinary spear-pointed aspirating needle, is inserted in the fifth or sixth interspace in about the anterior axillary line, or slightly farther back, particularly when the left side is injected. The quantity of gas that can be injected depends on the presence or absence of adhesions, the amount of infiltration in the lung tissue, the condition of the heart, and the size of the pleural cavity. In an individual of average size, if no adhesions are present, 80 cubic inches of gas constitutes the minimum quantity that may be expected to collapse the lung. The maximum quantity is 170 cubic inches.

The wound is sealed with collodion, and, in order to avoid the escape of the gas into the subcutaneous cellular tissue, a tightly wound roller bandage is laid over the wound in the intercostal space, and held in position with a long strip of adhesive plaster."

"Of the possible accidents that may occur in connection with the operation may be mentioned: (1) Gas embolism; (2) wounding of the intercostal vessels; (3) pulmonary hemorrhage from puncture of the lung tissue; (4) wounding of the pericardium in the event of its being distended. The most serious accident occurring in this group of cases is one of hemiplegia. The most important theories in regard to the production of this condition are (1) the reflex theory; (2) the gas embolism theory."

"In another case a profuse hemorrhage occurred immediately after the introduction of the needle, and before the tube that conducts the gas had been attached. This hemorrhage was undoubtedly due to a rupture of some vessel, possibly in the wall of the large cavity that existed in the left upper lobe. It was a case of pulmonary apoplexy. The needle was inserted about two cm."

Fifty-two cases reported with following general results: (1) Diminution in cough and expectoration after two days; (2) in 48 to 72 hours diminution in fever; (3) almost uniform gain in weight. Some gained thirty to forty pounds in ten weeks; (4) cessation of hemorrhage.

1899. Karl von Ruck. Watery solution of tubercle bacillus.

Preparation:

1. Tubercle bacillus filtered out of rapidly growing highly virulent culture.

2. Dried in vacuum dessiccator after washing with distilled water to remove remains of culture fluid.

3. Powdered in agate mortar. Extracted with sulphuric ether; removes fat.

4. Dried and powered as before.

5. Further extraction in sterile distilled water over a warm bath at temperature of 120° F.

6. Proteids become dissolved in distilled water.

7. Fluid decanted filtered through porcelain.

8. Amount of proteids determined; preparation standardized to a certain percentage.

Three strengths: No. 1, 1-100%; No. 2, 1-10%; No. 3, 1%.

Initial dose 1-10 c.c., No. 1. Increase dose.

ided by climatic surroundings of Asheville, N. C.

You will thus see I have tabulated thirty-seven distinct methods of treatment for pulmonary tuberculosis and in all seventy-four modifications of the same. These have been suggested by men of high scientific attainment and are the joint product of years of scientific struggle.

Appended you will find a resume of the general results obtained from these various methods.

SUMMARY OF 78 CASES TREATED.

Class.	First stage.....	Second stage ...	Third stage.....	Total .....
No. of cases treated.....	25	28	25	78
No. months of treatment	3	4	4	3.75
Recovery	20	25	3	50
Per cent.....	100.	73.	14.	64.1
Greatly improved	.....	7	9	16
Per cent.....	.....	19.	43.	20.5
Improved....	.....	3	7	10
Per cent.....	.....	8.	33	12.8
Worse or dead	.....	.....	2	2
Per cent.....	.....	.....	9.5	2.6

1901. Urea in treatment of tuberculosis. Dr. H. Harper, New York.

Nine cases treated, 6 cured, 3 improved, bacilli still present in sputum, and 5 additional cases show great improvement. Dose, 20 grs., t. i. d., hypodermically or by mouth.

Theory: (1) Urea acts as an antitoxin to tubercle bacilli. (2) Bacilli fail to grow in meat broth when 1 to .001% urea has been added.

1901. Sodium cinnamate, intravenous, Dr. H. Guttman, New York. Thirty-three cases reported, 1 cured, 10 improved, no result in 9, 8 deaths, and 5 lost from observation. Small doses best. Pathological basis for treatment not given.

1901. Nitrogen in compression of lung. Conclusions from experimental work.

1. Tuberculosis of the lungs after compression shows much fibrosis about foci of disease, hence extension is less likely.

2. It furthers natural tendency to cicatrization.

3. Tuberculosis of lungs travels by contiguity or continuity, (a) air channels; (b) lymph vessels; (c) blood vessels.

4. Good effects of compression; limiting areas of diseases existing; favoring fibrosis; occluding avenues of dissemination of virus; compressing cavities mechanically enabling them to heal.

5. Diminution of absorption while compressed; prevention of secondary infection; diminution of tendency to hemorrhage.

6. No evidence that fresh tubercles can develop in compressed lung.

7. Healthy lung tissue can be compressed for one year and retain capacity for expansion on removal of pressure.

8. Accidents slight.

Uses of intrapleural injections.

1. Curative in pulmonary tuberculosis.

2. Palliative to prolong life for weeks or months; diminishes fever and expectoration.

3. Checks pulmonary hemorrhage.

4. Compressing pulmonary cavities aids in healing.

Over 350 cases now treated. General results as stated above in previous report.

1903. Antistreptococcic serum. S. C. Bonney, Denver. Twenty-five cases treated four months after climatic and other resources failed.

Conclusions:

1. Serum used with one exception in hopeless cases.

2. Varying effects of improvement when climate, etc., fail.

3. As an adjuvant, was beneficial.

1903. An analysis of 1500 cases of tuberculosis. Dr. Lawrason Brown, Saranac Lake, N. Y.

"In a disease of so relapsing a nature as tuberculosis, the inexorable test of time is

rarely applied in the study and the results obtained by any form of treatment. The object of this research has been to apply this crucial test to the permanency of the beneficial effects which are undoubtedly obtained by the sanatorium treatment of pulmonary tuberculosis. The use of different classifications, and in some instances the different interpretation of the same classification render any comparison a difficult task. Take, for example, the terms "apparently cured" and "cured." One observer applies them to patients who have gone a few months without symptoms, and whose physical signs, if all abnormal, are indicative of a healed lesion. Another thinks the time should be six months, a third one year, and possibly interprets the physical signs differently. It is to be hoped before long we shall have in America one classification adopted by the various sanatoria. The classification adopted by Dr. Trudeau is as follows:

"Incipient stage; slight local, with little or no constitutional involvement.

"Advanced stage. The local disease process extensive or in an advanced stage, or slight local pulmonic invasion with rather marked constitutional involvement or with complications.

"Far advanced stage. Marked signs of pulmonary disintegration, with marked constitutional symptoms.

"Improved condition. Physical signs showing process less active, or general health improved, with symptoms relieved or abated.

"Arrested. No activity in process in lungs, with absence of fever and other constitutional symptoms.

"Apparently cured. Abnormal physical signs absent, or if present, only slight and indicative of healed lesion. Absence for some months of pyrexia and of sputum or of sputum containing tubercle bacilli.

"Perfectly cured. Abnormal physical signs absent, or, if present, only slight and indicative of healed lesions. Absence for two or more years of pyrexia and of sputum, or of sputum containing tubercle bacilli."

Summary of results in 1,500 cases.

If we deduct 434 untraced cases, we have left but 1,066 cases, which have been traced. Of these, 31% were well; 6.5% arrested; 4% have relapsed; 5.2% are chronic; 5.3% are dead. Deducting from the number of incipient cases those that have been untraced, we find that there are left 258 cases. Of these, 66% are well, and 21% are dead.

Of the 563 advanced cases which have been traced, 28.6% are well, and 52% are dead; while of the 235 far advanced cases which have been traced, 2.5% are well, and 90% are dead. It must be remembered, however, that these figures are only approximately correct, as no doubt more of the untraced cases are dead than these figures would indicate.

A perusal of this comprehensive resume emphasizes the fact that several methods of treatment have produced very favorable results. The one line of medication which stands out foremost are the results obtained by diet, hygiene and climatic environment. In this group there are 1218 cases cured and 1632 markedly improved. For a while the Bergeon method of sulphuretted hydrogen gaseous enemata seemed to promise good results but today the treatment is only a memory. In connection with this treatment I would like to refer to some work I did in 1890. I demonstrated conclusively that properly prepared neubulized antiseptic oils reached the pulmonary alveoli of the animal and the human lung. Previous to that time the text books stated that such vapors did not reach beyond the larger bronchial tubes. A demonstration of the fact that they did reach the pulmonary alveoli lead me to conclude that their use would be of great value in the treatment of pulmonary tuberculosis.

I wish now to confess to the error of my conclusions respecting the value of this treatment. I now know that whilst these vapors do reach the alveoli they do but little if any good when they get there. I now say the value of such medication is confined largely to diminishing inflammatory irritability merely of the mucous membrane of the respiratory tract. This form of treatment cannot in any sense be considered curative, but only as a palliative. Another treatment that was justly received with much favor at the time, was that known as the Shurley-Gibbes treatment. This form of medication so in-

terested me that I went to Detroit, Michigan as the guest of Doctor Shurley and was enabled to come in close contact with this form of medication. Today I consider this treatment an excellent one but it does not appear to be very generally used.

Probably one of the most daring suggestions for the cure of pulmonary tuberculosis was that suggested by Doctor J. B. Murphy and known as the Nitrogen Gas treatment. It has always seemed to me that the life of a lung was due to its activity not to its quiescence. Enough time has now elapsed so that we can fairly estimate good results if any from this form of treatment. As far as I am able to judge the treatment today is seldom if ever used.

GENERAL CONCLUSIONS.

With all this vast array of scientific struggle, what progress have we made in the treatment of pulmonary tuberculosis? We have observed that there is scarcely a drug in the pharmacopeia, hardly a method either physical, electrical, hydropathic or mechanical, which has not been advocated. We must admit that the discovery of the tubercle bacillus, with all our comprehensive knowledge of its histological and pathological properties, has not insured any general immunity from its ravages. The tendency of pulmonary tuberculosis is always toward spontaneous recovery. It seems reasonable to conclude from the vast number of reports presented with so much scientific enthusiasm and with such a great array of collateral proof as to their efficacy, that there does not exist a definite caused relation between the remedy used and the cure effected. It appears to me that the cures reported are the coincidence of the treatment used, rather than definitely due to its use.

We do not know what specific systemic process produces connective tissue formation. Until we know what this basic systemic process is, and upon which rests the control or cure of tuberculosis, our treatment must be considered tentative.

The amazing success of diphtheritic antitoxin leads us to hope that the discoveries of the future may lie in an anti-tubercular toxin. From such an anti-bacillary toxin, we may hope for success in controlling bacillary invasion. Such control, however, must always come from high vital resistence first; the action of anti-toxin second. It seems evident that any effort to cure pulmonary tuberculosis by drug domination is and ever will be futile. Twenty-five years of scientific struggle in the United States has demonstrated the absolute failure to effect a cure alone by drugs. It is evident that no medicine in a bottle ever cured tuberculosis. Great advances, however, have been made in the direction of collateral therapeutics. By these I mean baths, electricity, massage, magnetism, osteopathy, hydrotherapy and individually indicated lung gymnastics. These have their proper place and use, purely as an aid to nature. They must, however, always play a secondary role and be subservient to the great natural agencies of pure air, pure water, pure food and judicious exercise. Right living saves from tuberculosis. The closer we live to nature, the freer from tuberculosis. No considerations of commercial expediency can ever justify the employment of labor in unhygienic surroundings. It stultifies scientific struggle to destroy bodies from eighteen to forty years of life, which should live triumphant for sixty to seventy years, *merely* to make money.

The scientific resources then that have stood the crucial test of time and experience, and which are the beacon lights to guide us onward, are in hygiene, diet and climatic environment. Preventive medicine has made immense strides until today its influence is widespread; an agency of increasing potency and enlarging scope. Foremost in this work of publicity are the circulars issued by the Illinois State Board of Health. The latest third revised edition is a model of its kind, and its influence for good in thousands of homes is incalculable.

With the knowledge that the manifold agencies of nature cure, not drugs, has come an interesting number of efforts to practically apply these abundant and all pervading resources.

Foremost in this scientific struggle against tuberculosis is the active part taken by the

physicians of the great State of Illinois. The locality chosen for this convincing proof is the inland City of Ottawa. Here a wooded hill-top with sandy soil and perfect drainage, overlooking a running stream, and bathed in the subtle chemistry of sunlit slopes and ozone laden air, can nature surround the tubercular body with all the agencies that tend to promote tubercular control. Under such natural conditions will it be possible for tuberculosis to vanish. The tubercular must have an abundance of oxygen; they may live weeks without food but only five minutes without oxygen. If we are to cure tuberculosis we must breathe pure air twenty-four hours out of the twenty-four. Oxygen and oxygen alone reduces fever, aids digestion, gives refreshing sleep, and heals the lungs. But not alone in this spot but in any spot where nature can encompass our bodies. Eighty-five per cent of all cases of tuberculosis can be as easily cured in Illinois as elsewhere. Climate has been commercialized. From the far off western slopes has come the dogma, there and only there can you be cured. Leave home and friends and journey far; for only in certain sacred spots can you be healed. The Medical Science of the twentieth century places the stamp of falsehood on such a monstrous claim. The blessings of nature are universal. They are all about us, all we have to do is to trust ourselves to them. Not by living in sunless houses with dampened basements, moisture laden walls, darkened bedrooms, heavily carpeted floors and draperies of death; but where pure air and sunshine can circulate in every crevice, and the death dealing demons of decay be banished by the universal chemistry of nature.

We have learned what is best in general management, through individualizing each case. We must strive to increase the physiologic power of resistance. The unwelcome invading myriads of bacilli must be met and overcome by the resistant systemic host. It is our own vital resisting power that cures. Tubercle bacilli have been with us from time immemorial, and doubtless will continue to be, but in decreasing numbers. When we learn to live right, will we be free from the danger of tubercular infection. The errors of the past are a guide to the truth of the future. Exclusion of error admits the pure light of truth to shine. What a pathway of promise awaits the twentieth century scientist. The shackles of superstitious reverence for scientific authority are forever broken, and guided by the light of reason, will we mount to greater heights of research and discovery.

Let this scientific spirit burn on and on with quenchless flame. The struggles of the past are but an incentive to the progress of the future. Unfading memory recalls the many heroic ones, whose lives have been laid down upon the altar of this scientific struggle. But they have not lived in vain. Their works live after them. What greater work can await us. Let us each and all do our part, that in the end, tuberculosis may forever be banished from our midst.

BIBLIOGRAPHY.

Mays Medical News, Philadelphia, vol. 44, pages 267 to 272; Medical News, Philadelphia, vol. 47, pages 396 to 401.

Robinson, New York Medical Journal, vol. 42, page 533 plus.

Whittaker, Journal American Medical Association, vol. 4, page 676.

Williams, Boston Medical and Surgical Journal, vol. 113, page 313 plus.

Evans, New York Medical Journal, vol. 83, page 264 plus.

White, Medical Record New York, vol. 59, pages 593 to 596.

Boston Medical and Surgical Journal, vol. 116, pages 625 and 629.

Williams, Boston Medical and Surgical Journal, vol. 117, page 545 to 548.

Roeth, Boston Medical and Surgical Journal, vol. 124, page 551.

W. J. Herdman, Transactions of the Michigan Medical Society, vol. 11, pages 106 to 110.

Durant, American Practitioner News, Louisville, vol. N. S 3, page 257.

Flint, New York Medical Journal, vol. 48, page 617.

Trudeau, Medical News, Philadelphia, vol. 55, page 337.

Von Ruck, Therapeutic Gazette, Detroit, vol. 5 sss, page 505; Therapeutic Gazette, vol. 15 sss, page 78; Therapeutic Gazette, vol. 15 sss, page 80; Journal of Tuberculosis, Ashville, vol. 5, page 165.

Fisch, Journal American Medical Association, vol. 30, page 303.

Tyndale, New York Medical Journal, vol. 52, page 602.

Lobinger, New York Medical Journal, vol. 52, page 677.

Thomas, Journal of the Am. Med. Ass'n. May 28, 1898, page 1258, Chicago Medical Recorder, Oct. 1900, page 235.

Cohen, Journal Amer. Med. Ass'n., vol. XIV, pages 186-90.
Jones, Journal Amer. Med. Ass'n, vol. XIV, page 788.
Abbott, Johns Hopkins Hospital Bull., vol. II, pages 4, 6.
Johnson, Jour. Am. Med. Ass'n., vol XXX, page 315.
Gibbes, Therapeutic Gazette, Detroit, vol. VII 3s, page 217, 242. Therapeutic Gazette, Detroit, vol VIII 3s, page 312.
Ingals, Medical and Surgical Reporter Phil., vol. LVII, pages 210, 220.
Solly, Sanitarium,vol. XXVI, pages 132, 162.
Klebs, Med. Standard Chicago, vol. XII, pages 74, 76.
Wells, Journal Amer. Med. Ass'n., vol. XX, page 439.
Hershey, Medical Record, N. Y., vol. XLIV, pages 809, 811.
Smith, Medical Record N. Y., vol. XLIV, page 72.
Shurley, Trans. Mich. Med. Soc., vol. 18, page 69-93.
Solly's Resume, Boston Med. and Sur. Journal, CXXXI, pages 51-61.
Boardman, Boston Med. & Sur. Journal, CXXX. 1894, pages 492-5.
Wilcox, Therap. Gaz., vol. XI 3s, page 518.
Nuclein, Medical News Phil., vol. LXV, pages 657-675.
Babcock, Journal Amer. Med. Ass'n., vol. XXIV, page 510.
Paquin, Journal Amer. Med. Ass'n., vol. XXIV, page 842.
Longstreet Taylor, Medicine Detroit, vol. I, page 385.
Conway, N. Y. Med. Journal, vol. LXI, page 685.
Rochester, Jour. Am. Med. Ass'n., vol. 24, page 840.
Mitchell, Jour. Am. Med. Ass'n., vol. XXVII, page 362.
Place, Jour. Am. Med. Ass'n., vol. XXVII, page 478.
Cobb, Jour. Am. Med. Ass'n., vol. XXVI, page 370.
Carlucce, Med. Record, N. Y., vol. XLIV, page 515.
Edson, Med. Rec. N. Y., vol. XLIX, pages 185-91.
Flick, Jour. Am. Med. Ass'n., vol. XXIX, page 203.
Hirschfelder, Jour. Am. Med. Ass'n., vol. XXIX, page 208.
Blank, Jour. Am. Med. Ass'n., vol. XXVIII, page 392.
Ingalls, Jour. Am. Med. Ass'n., vol. XXVIII, page 913.
Hirschfelder, Jour. Am. Med. Ass'n., vol. XXX, page 299.
Barton, Med. Rec. N. Y., vol. LII, page 376.
Ingraham, Jour. Am. Med. Ass'n., vol. XXX, page 313.
Loomis, Med. Review, St. Louis, vol. XXXVIII, page 377.
Wixham, Jour. Am. Med. Ass'n., vol. XXX, page 359.
Denison, Jour. Am. Med. Ass'n., vol. XXX, page 290.
Weaver, Jour. Am. Med. Ass'n., vol. XXXII, page 74.
Murphy & Lemke, Jour. Am. Med. Ass'n., Oct. 14, 21 & 28, 1899.
VonRuck, Therapeutic Gazette, vol. XV 3rd, page 78.
Harper, New York Med. Jour., vol. LXXIII, page 318 & 1147.
Guttmann, N. Y. Med. Jour., vol. LXXIV, page 372. Jour. Am. Med. Ass'n., vol. XXVI, page 157.
Bonney, Med. News, Phila., vol. LXXXII, page 1108.
Brown, Jour. Am. Med. Ass'n., Nov. 21, 1903, pages 1268-1272.

Discussion on the papers of Drs. Thomas, Mix and Pettit.

Dr. Norman Bridge, Pasadena, Cal.—Mr. President and Members of the Society: I am very glad to have heard these papers, especially that of Dr. Mix, (this paper has not been handed in) although he takes a very extreme view of the subject. Certainly, that paper ought to be a great comfort to a tuberculous family, to people who have heretofore regarded themselves and their family as being predisposed to tuberculosis. I can imagine nothing more comforting than Dr. Mix' paper, and, I believe, we could do no greater service than to send a copy of his paper to these families.

I think he is in error as to the number of people who have tuberculosis. He has doubtless gathered his statistics carefully from the data at hand, but the cases of tuberculosis have not all been counted. It is certainly not the observation of most practitioners who have seen great numbers of patients with tuberculosis and who have also seen many post mortems that a large number of people have tuberculosis without knowing of it, or for them to recover from it without having known that they had it. It is discovered by physical examination or by collateral evidence, or it is discovered post mortem.

That is a serious objection to his reasoning as to the number of people who have tuberculosis. But his reasoning about the absurdity of the great emphasis that is placed on a special predisposition is important, and that I commend, as, I think, we all must.

Dr. Pettit's paper (this paper will appear next month) is so magnificent and so perfect that I cannot criticise it, except to criticise it favorably, except, perhaps, with reference to one point and that was a casual opinion he expressed, a fear that the modern treatment of tuberculosis is likely to go out of fashion because of certain reasons. I do not agree with him in this, but I do agree as to the advantages of managing patients in sanatoria and the difficulties of managing them out of sanatoria; the difficulty of inducing them to do the right thing; the difficulty of controlling their whims.

What he said about the inexpensiveness of the necessary domicile is worthy of notice, because if brought to the attention of the public we could have more sanatoria. I believe that the modern treatment will gain in favor and become more popular. It is spreading rapidly

among the people as well as among the profession, and I believe that the effect of that on the people as a whole is to induce greater numbers of them to live more out of doors; to have better ventilation in their houses, and, especially, in their sleeping rooms. I believe in twenty-five years this will lead to an increase in the average power of the people to resist infection, and particularly tuberculous infection. And I cannot imagine any more favorable result than that.

As to Dr. Thomas' paper, that was a very useful paper and a very sane paper. And I was very glad to see a man have the courage to express a change in views as he did tonight. There is no doubt that he is entirely correct that the treatment by good hygiene, by outdoor life, by a better nutrition, as well as, perhaps, by climatic influences, is the best treatment and that everything else is subsidiary and secondary. There is no question as to the truth of that doctrine.

I would like to say a word with reference to two or three of the treatments he mentioned. First of all, I wish to criticise his rather implied doctrine that it is useful to exercise the lung in pulmonary tuberculosis. I do not believe that that is true, although I used to believe it. That it is important for these patients to take deep breaths every few minutes all through the day, and that devices for expanding the lung are useful. I can see no reason why a tubercular lung should be exercised when a tubercular joint is kept at rest. The thing we ought to do with a tubercular lung is to keep it at rest, if we can. We can resort to some of the measures he referred to without lessening the effect of the good hygeine that is so important. We can use the so-called antitubercular sera, if we could manage to employ them without doing physical harm to the patient. We ought to keep our minds open for any improvement in these sera; be ready to use them in carefully selected incipient cases, and use them with caution. In the case of some patients they nearly always do harm, although theoretically there is no reason why they ought not to do good, and I hope the time will come when they will be of some benefit.

Creosote still is fashionable in the hands of many practitioners. There is, I believe, no scientific evidence that is worth anything that creosote is especially inimical to the tuberculous infection. It does, in some people, improve the digestive apparatus by lessening decomposition in the intestine, but it has done more harm than good by the large doses that have been given.

Discussion.

Dr. Thomas closing the discussion of his part. I thank Dr. Bridge for his kind commendation of my paper. I disagree with him when he states that he considers lung gymnastics contra-indicated in tuberculosis. I believe in many cases they are individually indicated. I fail to recognize the pathological relation that exists between tuberculosis of the synovial membrane in a knee joint and the manifestation of tuberculosis in the pulmonary alveoli. I can readily appreciate how curative absolute rest would be in the case of tuberculosis of the knee joint. I fail, however, to appreciate the value that such absolute rest would be when applied to pulmonary tuberculosis. If this relationship could be made clear to me I would be glad to agree with Dr. Bridge in his belief. For the present, however, I must still believe in the benefit of individually indicated lung gymnastics in the majority of cases.

EMPYEMA.*

BY J. HERBERT FRANKLIN, M. D., SPRING VALLEY.

I would characterize as empyemic every purulent pleural collection, whether saculated or diffuse, large or small, of whatever kind or character, embracing in the list the so-called pleural abscess regarding which so much has been written by various authors.

The culture medium of every empyemic abscess being the serous effusion of a previous pleuritic inflammation, it would be well to consider the anatomical character of the pleura and some of the pathological conditions existing in so called wet pleurisy.

The pleura is a serous membrane whose parietal layer invests the inner surface of the ribs from the first to the eleventh, from the sternum to the spine and is then reflected over the surface of the lungs; a visceral layer, which, when joined to the parietal layer forms the pleural cavity. It extends from the superior surface of the diaphragm, which it covers, to one or one and one-half inches above the first rib. Thin, delicate, extremely vascular and largely supplied with lymphatics as it is normally, when pathologically changed in disease, it assumes a different character.

When I said that a pleurisy always precedes an empyema, I meant that in all cases, whether it be the result of injury, a sequela of typhoid fever, measles, pyaemia, or other septic trouble, or whether the result of a pure inflammatory condition, there is always present an inflammation, slight or otherwise, through whose agency a serous effusion is produced, this effusion being a culture medium for the various bacteria producing em-

*Read at the 54th Annual Meeting, May 17, 1904.

pyema. And right here let me say that, in my opinion a very large percentage of cases we all see of empyema is the result of an error in diagnosis and inability on the part of the practitioner to diagnose the true condition previously existing. A case in point: About three years ago I was called to see a child, male, age seven years, who was complaining of a sharp pain in the left side; temperature a hundred and two, preceded by a slight chill; breathing short, hurried and bronchovesicular apparently upon auscultation. After a hurried examination I made a diagnosis of pneumonia. There was no rusty sputum following, yet the case was treated as one of pneumonia. Within a week I found I had a case of pleural effusion, which notwithstanding the then violent treatment given, became infected and resulted in empyema. Three cases of this character have come before my immediate notice within the last several months, where, had a correct diagnosis been made by myself and the other physicians at the start, perhaps had more care been exercised, stringent diaphoresis, diuresis and counter irritant methods been employed, the chances are strongly in favor of such rapid absorption of the pleuritic effusion as would have prevented any subsequent infection which took place.

The differential diagnosis between pneumonia and pleurisy is so enlarged upon in all standard text books as to make it unnecessary to take your time in this paper. I would urge, however, in this connection that all of us be extremely careful when called to a case where there is any possibility of an existing pleurisy.

While empyema is usually divided into primary and secondary, the term means an infected effusion. When primary we consider it as an abscess pure and simple of the pleura, not metastatic from gangrene, abscess, pyaemia, otitis media, typhoid fever, or other septic trouble, as is the case in secondary empyema. When infection has occurred the hitherto delicate membrane constituting the pleura becomes greatly thickened, a fibrinous deposit is thrown down and a pyogenic membrane formed. This thickening, depending as it does upon the virulence of the infection and the length of time such infection is allowed to continue without interference, may be from a slight increase above the normal to a half inch or more. As the process continues, gangrene of the membrane occurs, shreds of dead tissue add additional media for microbic culture and a granulating surface is left beneath, these granulations oozing pus in enormous quantities.

When spontaneous cure results, either by absorption, as in a very small percentage of cases, or by rupture into some adjacent organ, the process is one of continued granulation with adhesion, in the end obliterating the pleural cavity. The pleural cavity, extending as it does to the upper surface of the diaphragm, it is possible for a contiguous peritonitis to be lighted, adhesion to occur between the inferior surface of the diaphragm and the transverse colon or the stomach, rupture to occur and the septic pleural contents be discharged per rectum. It is also possible, and occasionally occurs, for the thickened pleural membrane to give way at a gangrenous spot and the purulent effusion to be thrown into the bronchials and expectorated. In the vast majority of cases, however, fever of the hectic type occurs, the patient becomes emaciated, the body covered with a cold, clammy perspiration, sudamina to appear, the chest on the affected side to be almost immovable, slight pains to continue, intercostal fullness to increase, and an oedematous condition to appear over the ribs. The previous existing flatness upon percussion becomes increased; a short, sharp cough now becomes more marked, sometimes fits of coughing lasting five or ten minutes occurring; the urine becomes scanty and high colored; bowels sometimes constipated, occasionally diarrhoeic; the tongue red and glazed; the face of the patient anxious; in short, we have a picture of extreme sepsis.

Blood counts in this condition show a leucocytosis of from ten to fifty thousand or even more, while in simple serous pleural effusions the blood count is less than ten thousand, a point in differential diagnosis. The degree of the septic symptoms depends somewhat upon the character of the infec-

tion. In children probably fifty-three per cent, at least from fifty to fifty-five per cent of empyemic abscesses depends upon the pneumococcus, while in adult life probably the same per cent of cases results from streptococcus invasion. The staphylococcus, Friedlanders baccilus, diptheria germ, the gonococcus and the baccilus of tuberculosis, each claims its proportion of victims in this disease, but, with the exception of the last named, not to any considerable extent. And whether it be true that the baccilus of tuberculosis originates empyema in many cases, or whether it is grafted upon an already enfeebled membrane, is a matter of speculation, many good men being upon either side.

The prognosis in all cases of empyema depends entirely upon the treatment used; if the expectant method, bad; if scientific surgical treatment be given, good; the majority of cases recovering with only a slightly crippled condition of the affected side. This rule, however, is more or less affected by age, aged people giving a smaller percentage of perfect cures even surgically than those of youth.

As would be inferred from the above, the treatment of empyema is strictly surgical. After infection occurs, the chances are so much against absorption that radical measures are called for. Whenever by auscultation and percussion an effusion is found within the pleural cavity, the introduction of the aspirating needle will determine whether or not this is a pleural serous effusion, or pus. If serous in character, thoracentesis is to be immediately performed, but if upon the introduction of the needle the accumulation is found to be purulent, a more radical operation is necessary. There must be no half-way measure in empyema. Remembering that in all cases there is liable to be adhesion in the lower part of the pleural cavity between the visceral and parietal layers, the site of operation should be chosen at a point where the purulent contents may be evacuated with the least trouble. In as much as the pleura extends usually to the eleventh rib, and adhesions form in the majority of cases as high as the tenth or ninth, the site of selection would probably be the eighth rib. The patient having been anaesthetized and the part carefully prepared, the incision is made directly over the rib in the mid-axillary line. Divide the periosteum, separate it from the bone and divide the bone with a Gigli saw or a bone cutting forcep, removing the amount necessary, whether that be a half inch or a great deal more. The anaesthetic is now entirely removed and the pleura opened, for the reason that as soon as the pleural cavity is entered, the patient will make, or is liable to make a violent inspiratory effort, and death might ensue from the anaesthetic. With the finger introduced into this space the adhesions are broken down and the pus allowed to flow. In a large percentage of cases we not only find adhesions between the diaphragmatic surface and the adjacent pleura, but also a cheesy deposit of sediment thrown down from the pus within the cavity, which it is necessary to break up with the finger in order to allow its free exit. A copious flushing with saline solution, a mild permanganate, or even bichloride is necessary to force out the coagulated matter which has collected. We usually find the lung bound in the upper portion of the thorax by firm adhesions. The finger should be swept carefully through these, breaking them up in the same manner as you break the adhesions in appendicitis, or other abdominal operations. As soon as the adhesions are proaching the external wound. Should we find upon breaking up the adhesions that the expansion of that portion of the lung inbroken, we find the lung immediately beginning to expand, its lower portion involved is not complete, the patient should be instructed to hold the nostrils and make a forced effort at expiration. The air in this manner is forced from the sound lung to the one upon the crippled side and expansion becomes a necessity. Should the pain caused by this procedure be extreme, the patient should be instructed to judge by his or her own sensation. Every effort should be made to favor obliteration of the cavity during post-operative treatment. The intention is to bring about the best possible degree of re-expansion of the compressed lung. A method advised by Ralston James is very effective.

that is, forcing water daily by air pressure from one bottle to another, each bottle holding about a gallon, these bottles being connected by tubes.

Regarding irrigation following the primary operation, we should be governed by the temperature range. Should at any time the temperature again go beyond the normal, it means that a purulent collection is being absorbed, and irrigation should be resorted to, the idea being that by means of the irrigating fluid you may break down the adhesions which have encysted the pus and allow it free drainage. A drainage tube should be inserted, its length depending upon the depth of the cavity. I, personally, prefer double drainage, for the reason that with a double tube there is an easier exit for all solutions that are placed within the cavity. As has been said, the cure in empyema depends upon the entire obliteration of the pleural cavity, for that reason as the amount of pus becomes less as the cavity diminishes in size, the drainage tube should be removed and made shorter. Should fits of coughing be found to depend upon the pressure of the tube against the visceral pleura, a broad rubber flange should be placed upon that end of the tube. If we find that following this procedure there is still left a sinus leading to the upper portion of the pleural cavity, which, despite all stimulating irrigation, fails to respond by granulating closure, a counter opening should be made at its upper part, in this way treating it as we would a sinus in any other part of the body.

And this leads to the one and only point in this paper: Treat empyema as you treat an abscess cavity in any other part of body: drainage, irrigation when necessary, and counter opening.

Gentlemen, I thank you.

Discussion.

Dr. Carl Wagner, of Chicago.—Mr. President: In speaking of the treatment of cases of empyema, I always think of what Dr. Carl Beck, of New York, said in 1897. In discussing this same question he referred to the inadequate surgical treatment of empyema, especially to siphoning of abscesses or of large effusions. He expressed himself in this manner: Siphoning, or making a small opening, not allowing for free drainage, was just like saying, "Wash me, but don't wet me." (Laughter.) I am certain that many of the formidable operations, like the Estlander and Schede operations, will be seen less often if early and thorough surgical interference is undertaken. The essayist said we should wash out the cavity once or several times, according to the indications, taking fever as one of the symptoms during convalescence; while others, I think the great majority, adhere to the opinion that this is not only impracticable but dangerous. I think I take the stand the essayist takes, that some of these cases of empyema need irrigation at one time or another.

I have a case at present in the hospital where, after the evacuation of the abscess, everything seems to be quite dry, yet about a pint of irrigating fluid brought out a mass of fibrin as big as a placenta. Everything went along nicely until the third day; no fever, but the discharge seemed so slight, that I resorted again to irrigation and there came away a large piece of fibrin, as large as a soup plate which had occluded the drainage opening. About the ninth day the patient did not feel quite comfortable; still there was no fever. Again, I irrigated, and another large obstructing fibrinous clot came away, and shortly after it a large secondary abscess discharged through the opening.

In regard to the size of the rib to be taken out for the removal of such collections, I believe it is wise in large abscesses not to take out one, but resect two ribs, and, if even according to the surgeon's judgment, three ribs to the extend of an inch and a half to two inches. I have personally witnessed Schede's operation for the treatment of empyema, especially his large thoracotomy, and have come to the conclusion that all Dr. Beck, of New York, has said in that direction should be endorsed.

Dr. Albert Goldspohn, of Chicago.—In this connection I might mention a rather unique experience. Several years ago, in four cases of empyema in children, I was requested by Dr. Futterer to operate on a couple of children and upon his own responsibility in this way: To empty out the pus mostly, and then to introduce normal salt solution, with about one part in five hundred of oil of cloves dissolved in it. This was introduced into the chest cavity and allowed to flow through a canula several times, and the cavity was finally left about one-half full of this solution. I did this altogether in four instances in children, in three of which it resulted, after the one washing, in a permanent, definite cure. In one case, the fourth, I did not have that fortunate result; this case subsequently required resection of ribs and the introduction of a drainage tube. In these cases of empyema I have adopted the constant practice of resecting, at least, one rib posteriorly, and one anteriorly, or two, if necessary, both anteriorly and posteriorly, and inserting a good large drainage tube. When that has been done, I have seen definite results, without requiring the more severe operations that are otherwise needed later. I have used the oil of cloves treatment effectually also in a couple of cases of pus in joints; in one case a metastatic affection that occurred in puerperal infection, washing out the knee joint with the oil of cloves solution.

The other was a case in which the wrist joint was involved. The joints were washed out with this oil of cloves in normal salt solution, and both cases ended in recovery after one washing.

Dr. E. M. Sutton, of Peoria, Ill.—The subject of empyema is particularly interesting to the country practitioners because we see it in children as well as adults. I did not hear the essayist say whether it occurs in children or in adults particularly. It follows pneumonia, and we rarely see the cases until empyema has developed. Then, there is usually a chronic abscess of the pleura, and in my experience this abscess is preventable. An operation that is performed for empyema is done for the pleural effusion which may clear up under medical treatment, but in those cases in which empyema does not clear up under medical attention, until after three or four weeks, when there is bulging on the chest, it becomes necessary to do the radical operations mentioned.

In two cases in which pleural pneumonia was recognized, the operation suggested by the essayist was performed and pure serous fluid drawn off. It filled the pleural cavity, compressed the lungs, so that the patient was in great distress from symptoms of heart displacement, but there was absolutely none of the textbook danger that is supposed to exist when we draw off suddenly fluid from the chest cavity. This leads me to think that the proper course to pursue in these cases is to treat them before they become empyemas, even if they are of tubercular origin from traumatism or from pleuro-pneumonia, and in that way prevent these deforming, crippling operations that have to be done for late empyema, when the abscess wall is as thick as that described by the essayist.

COMPARATIVE EFFECTS OF SMALL-CALIBER HIGH VELOCITY BULLETS WITH BULLETS OF LARGE CALIBER AND LOW VELOCITY.*

BY HOWARD CRUTCHER, M. D.

Instructor of Surgery in the University of Illinois; Consulting Surgeon of the Chicago & Alton Railway Company.

During the fall of 1903, while hunting deer, I was privileged to observe at first hand some of the comparative effects of the two classes of projectiles above mentioned. The recent introduction of the metal-patched, soft-nose bullet for use in pocket firearms may give to this subject something of immediate interest.

At the outset some explanation of terms may be desirable. The figures 38-55, for example, are presumed to cover a rifle of .38 caliber carrying a ball propelled by 55 grains of black powder. As a matter of fact, smokeless powder having superseded the black, as a rule, a quantity of the former corresponding in force to the latter is employed. To put the case in a few words as applying to a large number of present-day cartridges, the old standard of naming has been retained while a new motive power has been applied. Much confusion of mind seems to exist concerning the character of the various projectiles employed. A gentleman of fine general intelligence solemnly assured me that it was folly to attempt to bring down a deer with "any small caliber gun," giving as an illustration that he had shot a buck five times through the body without bringing him down, the animal falling at last before the fire of a 45-90 in the hands of an old hunter. This gentleman was using the so-called "war bullet," a solid metal-patched ball, without the soft lead nose that produces such deadly effects. Having something more than an ordinary acquaintance with woodsmen and hunters, I must confess that the reports concerning the merits of the two styles of weapons are very confusing. An old trapper will inspect a small-caliber gun with the remark: "All right for tin cans and fine shootin', but if you want to kill game don't fool with it;" and, pointing to a battered 45-90 hanging on the wall of his camp will assure you that no other firearm is worth considering. One man who has spent his life in the woods said to me one night: "I have thrown away rifles; a shotgun loaded with buckshot is the thing; it will tear an animal to pieces as nothing else will, and I always feel safe with that gun."

On the other hand, wandering into some far-off camp, one will find the owner busy polishing the newest type of small-caliber rifle, and ready to give his reasons for abandoning the older types of gun. In the cases cited below I give the facts, leaving the reader to apply his own conclusions.

A buck, gross weight, 125 pounds, was shot at a distance of 100 feet with a .38 caliber rifle carrying a soft lead bullet weighing 225 grains propelled by smokeless powder

*Read at the meeting of C. & A. Railway Surgeons, Springfield, Oct. 19, 1904.

equivalent to 55 grains of black powder. The velocity of this ball was 1285 feet per second. The deer was struck three times, once through the lungs, twice through the abdomen. It ran over difficult ground for 20 yards, fell, and lived about ten minutes. It was dressed at once. The lung wound was the decisive one. The ball had struck a rib, which flattened it, and caused it to make a frightful wound through the lung tissue. The chest cavity was filled with blood. Two balls passed entirely through the cavity of the abdomen without striking any bone. There were nine distinct perforations of the intestines, slight laceration of the mesentery, and about four ounces of blood free in the cavity. I was surprised to note that the wounds of entrance and of exit presented no great differences as to size.

The second deer, about the same weight as the first, was shot at 225 yards, the weapon used in this case being one of the familiar 30-30 type, carrying a soft-nose bullet weighing 170 grains at a speed of 1960 feet per second. This ball passed through the abdomen without striking a bone. The animal ran fully a quarter of a mile after the shot, but was tracked by a broad trail of blood. On opening the abdominal cavity all present were impressed by the large quantity of blood and fecal contents present. Fecal extravasation was profuse. An attempt to classify the wounds was not practicable. Instead of perforations there were ragged lacerations of the hollow viscera which permitted the escape of torrents of blood and fecal matter. The stomach, although not in the track of ball, was ruptured from concussion. An old hunter who was present summed up the case by saying that the deer "must have been eatin' dynamite."

The third animal, a small doe, was shot at 350 yards, falling at the fire. It was believed that this animal had been shot through the head. The ball was of .30 caliber, weighing 170 grains, having a muzzle velocity of 1960 feet per second, struck the deer in the neck, shattering four of the vertebrae, obliterating the cord, and doing immense damage to the soft tissues of the neck. The great vessels of the neck were torn across, tremendous bleeding resulting. The wound of exit was ten times the diameter of the wound of entrance.

The fourth case was that of a large buck. He was shot at 50 yards with the same weapon and ammunition as those used in the case next above reported. The ball struck his head near the insertion of the left antler. All the cranial bones were shattered, and brain substance was spattered several feet from where the animal went down. It may be questioned whether a charge of powder if exploded within the cranium would have produced greater havoc.

In this connection, two cases of bone injury may be of some interest. A deer was struck in the foreleg at 100 yards, the ball, of the 45-90 class moving at a muzzle velocity of 1480 feet per second, entering above the knee. This ball weighed 300 grains. The bone was badly shattered but the soft tissues were but slightly injured to all appearances. Bleeding was slight. Other shots, of course caused the fall of the animal. The second deer was hit with a soft-nose 30-30 ball, the shot taking effect in the region of the hamstrings. In this case the bone was destroyed for the space of several inches and the soft structures suffered most severely. In fact, the limb was all but severed. This animal was found nearly dead from bleeding and was easily captured. The blood vessels were open and death from bleeding was but a matter of a short time.

On August 16, 1902, a wildcat weighing 45 pounds was shot at a distance of 60 yards with a 30-30 bullet, the same as described above. The ball passed through the shoulders of the animal, the force of the blow knocking the cat six feet from the point of injury. The wound of entrance was no larger than the diameter of a lead-pencil, whereas the opposite wound measured two by four inches. I have seen few wounds that appeared more ghastly.

Those who have pursued the muscallonge and are familiar with the character of its flesh will appreciate this experience: One day a companion hooked a fish weighing about twenty pounds, and after a fierce struggle to secure his prize brought him to within a few feet of the boat. The captor begged me to shoot the fish, but as I had only

a high-power rifle at hand I urged the folly of such a course. At this protest he vehemently demanded that I shoot the fish, be the results what they may. By some mischance the ball fired at close range, entered the body of the fish lengthwise, and the result may be imagined. There was a frightful concussion in the water and the fish was blown to fragments. Those who have fired the high-velocity soft-nose ball through a tin vessel filled with water will appreciate something of what the effects upon a large muscallonge might be.

Concerning the effectiveness of the modern pocket firearm charged with the soft-nose bullet, considerable experimenting with this weapon does not seem to justify the belief that it will prove much if any the superior of the old-style revolver so far as killing power is concerned. For accuracy and rapidity of fire there is none that may justly be compared with it. Very high velocity is essential if the mushroom bullet is to be of advantage over the old style ball. The 30-30 ball travels 675 feet faster per second than the 38-55. Experiments looking to the perfection of a pocket arm that shall embody the small-caliber high velocity principle are all the while going on, and at no distant day we may expect to deal in daily practice with revolver wounds that approach in character those frightful injuries inflicted by the rifle charged with the soft-point bullet.

Columbus Memorial Building.

THE MEDICAL ETHICAL CODE.

Doctors are continually heard to say: "No, I can't do that. Its not professional." It is comparatively seldom that such an insistence on a professional code of ethics is noticed in the conversation of lawyers or of engineers or of other followers of specialized callings.

What is the medical ethical code? What are the principles which a profession, more profuse in its disinterested charities than any other profession in the world, has established for its guidance?

It was about 2,300 years ago that the practicers of the art of healing began to take an oath emphasizing the responsibilities which the nobility and holiness of that art imposed upon them. Hippocrates, for ever to be revered, gave the oath his name. When a Greek physician took the Hippocratic oath and when the graduate of a modern medical school takes it the act is one not only of obligation for himself but of recognition for a great benefactor of mankind.

Here follows the Hippocratic oath in its essential parts:

I swear by Apollo the physician and by Aesculapius that I will reckon him who taught me this art equally dear to me as my parents, to share my substance with him and relieve his necessities if required, to look on his offspring in the same footing as my brothers, and to teach them this art if they shall wish to learn it. I will follow the system of regimen which, according to my judgment, I consider for the benefit of my patients and abstain from whatever is deleterious. I will give no deadly medicine to any one if asked nor suggest any such counsel. With purity and with holiness I will pass my life and practice my art. Into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption. Whatever in connection with my professional practice or not in connection with it I hear or see in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret.

No other secular profession has ever reached such a corporate consciousness of duties which it corporately owes to the rest of the world. The Hippocratic oath assumes that simply because a man has learned the art of restoring the sick to health he has passed into a realm in which the rules of personal selfishness are immediately abridged, if not expunged, and in which a new and special attitude toward human life must be taken.

In modern times the Hippocratic oath has been adapted and expanded till now it appears as far as Chicago is concerned in a sixteen-page booklet, entitled "Principles of Medical Ethics of the American Medical Association." The chapters of this booklet cover down to the smallest details such subjects as "The Duties of Physicians to Their Patients," "The Duties of Physicians to Each Other," and "The Duties of the Profession to the Public."

It seems that certain Chicago physicians have fallen from their high estate in respect of one of these duties. When a physician falls he falls from so great a height that the spectator cannot but be affected. Robert Louis Stevenson was not far wrong when he spoke of the modern scientific medical man as probably the noblest figure of the age. Except the priest, the physician is the first object of approach in distress. Except the priest, the physician gets deepest of all men into the heart of the community. The brethren of the physicians who have erred in the present matter must now lift their standard higher than ever. —Chicago Tribune.

Dr. John Howe of Russell, Lake County, recently married Miss Eva Rutledge, a school teacher and returned from a brief honeymoon to be assailed by a boisterous charivari party. Insistent demands of the crowd failed to coax the physician to the street. The clamor grew louder and at its height the bride flung open the door and rushed into the center of the noisy gathering. So taken aback were the members of the party by her sudden appearance and determined intention to disperse them that they fled. A ball player in his flight was injured so severely that he cannot enter the game for some time.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

NOVEMBER, 1904.

NEXT ANNUAL SESSION, ROCK ISLAND, MAY 16, 17, 18, 1905.

OFFICERS:

PRESIDENT—W. E. QUINE, Chicago.
FIRST VICE PRESIDENT—H. C. MITCHELL, Carbondale.
SECOND VICE PRESIDENT, J. F. PERCY, Galesburg.
SECRETARY—EDMUND W. WEIS, Ottawa.
TREASURER—EVERETT J. BROWN, Decatur.
EDITOR—GEORGE N. KREIDER, Springfield.

SECTION ONE.

Practice of Medicine, Medical Specialties, Materia Medica, Therapeutics, Etiology, Pathology, Hygiene, State Medicine and Medical Jurisprudence.

M. S. Marcy ..... Chairman
Peoria.

Fred Zapffe,
1764 Lexington st., Chicago.

SECTION TWO.

Surgery, Surgical Specialties, and Obstetrics.

Geo. L. Eyster.....Chairman
Rock Island.

W. H. Wilder ..... Secretary
103 State st., Chicago.

Committee on Prevention of Tuberculosis.

J. W. Pettit, Ottawa.
C. L. Mix, Chicago.
J. F. Percy, Galesburg.

Committee on Public Policy and Legislation.

Frank Billings, Chicago.
Carl E. Black, Jacksonville.
J. W. Pettit, Ottawa.
The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

M. S. Marcy, Peoria.
Geo. L. Eyster, Rock Island.
The Pres. and Sec'y, Ex-Officio.

The figures before the names of the Councilors refer to the Councilor Districts.

The Council.

(1) J. H. Stealy, Freeport.
(2) W. O. Ensign, Rutland.
(3) M. L. Harris, Chicago.
(4) O. B. Will, Peoria.
(5) J. Whitefield Smith, Bloomington.
(6) C. E. Black, Jacksonville.
(7) E. E. Fyke, Centralia.
(8) W. K. Newcomb, Champaign.
(9) J. T. McAnally, Carbondale.

MEDICAL GYMNASTICS AND MILITARY CALISTHENICS.

I am firmly of the opinion that a medical degree is as necessary to successfully prescribe and teach medical gymnastics as it is in prescribing medicine in the routine cases. Without a thorough knowledge of the blood vessels and muscles of the body, their uses and functions, no person should presume to teach exercises of this class. We must not get the idea that what is good for one patient is good for all. In my own experience both in private practice and in the army I have found it quite as difficult to correctly diagnose my cases and prescribe appropriate exercises as when prescribing internal treatment. It is reasonable to suppose that in exercising for health only such process should be employed as will develop the powers and activity of the organs upon which your health depends. As the object of taking physical exercises is to develop the lacking functional power of one or more of the vital organs and functions which are deficient in this respect, and as this deficiency varies in different individuals both in regard to location and its degree of variation from the normal, it is evident that no exact schedule can be formulated that will be suitable for universal use. Both the selection and the order of arrangement of such exercises must be decided by individual needs.

What these individual needs are depends upon the defective conditions of the system which have either been inherited or acquired.

Bodily exercise is no new thing, for the

Ancients practiced it, more systematically perhaps than we do. Indeed all peoples upon emerging from barbarism and turning to the less active arts of civilized life, have felt the need of athletic sports and systematized physical exercise to take the place of the marauding and hunting of their former savage mode of existence.

The opinions of former generations of medical men have not yet been outgrown by laymen, and many of the latter think that a permanent anatomic defect in the heart means sudden death, which is especially apt to be caused by physical exertion. The fact that overexertion, either mental or physical, can cause dilatation, and, perhaps fatal weakness, of the heart when it is defective, led to the prevalent opinion just expressed. Stokes, in the middle of the nineteenth century, was one of the first to register his disbelief in the danger of all exercise, and even faith in the curative effect of suitable kinds, for he wrote:

"The symptoms of debility of the heart are often removable by a regular course of gymnastics or by pedestrian exercise, even in the mountainous countries, such as Switzerland or the highlands of Scotland or Ireland[1]."

We all know the unsatisfactory results that we get in treating the various forms of heart disease with digitalis, strophanthus, strychnia, etc. Davis, Fitch[2] and other men have been much gratified with the results they have obtained in heart disease, rheumatism, anemia and obesity by using physical methods in conjunction with indicated medicinal treatment. In my own hands the method has been a great success. The history of the following case I believe will be of interest.

Dr. W., a well known Chicago practitioner had for years suffered with a very weak heart action and rapid pulse, he had been continuously under treatment for ten years when I outlined a series of resistance gymnastics for him, commencing of course, with the gentlest forms of exercise and gradually increasing the resistance. In one year his pulse beat had decreased from 95 to 80, heart action showing strength to correspond.

The most desirable thing in human life, now as it has been forever, is a sound mind in a sound body. Rational exercise will assist us to keep the body sound and wholesome and walking is the best form of exercise. When exercise is necessary the best prescription for the patient is, swing into an erect, lively, natural gait and cover a mile or two, or three, or more as your constitution warrants. Do this for several nights and you will soon find a great and salutary improvement in your health, appetite, physique and also temper. If conditions are such that walking cannot be taken, then a series of medical gymnastics and military calisthenics can be outlined that will be pleasant and beneficial and the best substitute for the outdoor work. Instruct the patient how to breath to the best advantage, deep breathing through the nostrils only, and then to walk and you have the ideal exercise.

In the early or first stage of pulmonary tuberculosis suitable exercise in the open air, combined with rest and nourishment promises better results than former methods. Tuberculosis was unknown among the American Indians until "store goods" and rations took the place of the food obtained by strenuous exercise, the daily hunt and chase. In obesity the fat is not on the surface alone, it is deposited at the expense of muscular fibre in the substance of the muscles and about the organs, and the heart suffers from this degeneration and is weakened. By properly regulated and graduated exercise this fatty heart will be enabled to throw

off its burden and renew its damaged tissues. Military calisthenics or exercise is the best, weights are dispensed with, there is no straining or over training, strength and agility are obtained. You avoid abnormal development, too much muscle is as great a calamity as too much fat.

Many people are seriously injured by the so-called "physical culture" fad and abnormal muscle fake, taught by men and women who adorn the magazines with a "naked" display of unnecessary muscle, we know the bubble will sooner or later burst and collapse follow. When exercise is taken to prevent or combat disease the course should be under the direct supervision and guidance of a physician or harm may ensue.

1. N. S. Davis, Jr., Journal A. M. A., Nov. 14, 1903.

2. Walter Fitch, Chicago Medical Record, June, 1903.

P. G. H. Farrell, Chicago.

DR. FAIRBROTHER'S LETTER.

For fear that all our readers have not read the letter of Dr. H. C. Fairbrother, of East St. Louis, member of the State Board of Public Charities, to the Journal of the A. M. A., published October 15th, 1904, and the able, complete and unassailable answer made to the state official by Editor Simmons, we republish below the communication in full.

This is the second time a member of the State Board of Public Charities has attempted to lecture us for our attitude of opposition to the present manner of conducting the charitable institutions of this state. The first was the letter of the Secretary, Col. J. Mack Tanner, published in the April, 1904, issue of this Journal, page 814. The letter of Col. Tanner like that of Dr. Fairbrother carries its own condemnation.

State Supervision of Public and Private Care of the Insane.

East St. Louis, Ill., Oct. 2, 1904.

To the Editor:—In your editorial, September 17, with the above title, your reference to Illinois institutions may admit of a little explanation. Your speak of the "ruin" wrought and their "fall" under the present system, as shown in articles in the **Illinois State Medical Journal.** I am aware that some such articles were published, but I believe the profession generally understands the animus and circumstances under which they were published. But when such reference to our charitable institutions is made in a journal of national circulation the matter assumes a different aspect.

Now, I am deeply interested in these institutions, am a visitor of them, and of similar institutions in other states, and if it can be pointed out to me in what particular, in any one of these institutions there is a defect, I will make an effort to remedy it. If any defects can be shown in the medical treatment of our insane, any want of efficiency or kindness on the part of nurses, any harsh treatment on the part of attendants, any lack of cleanliness or sanitary condition in the buildings or grounds; if, indeed, there is any point in any one of these institutions that will not compare favorably with any other institution for the insane in this country, I most earnestly want to know it.

I will gladly accompany you, Mr. Editor, or the former editor of the **Illinois State Medical Journal,** to any of these institutions you may select for this observation.

With reference to "the loss to the state of eminent medical men," I can recall but one change in superintendents during the present administration, that at Jacksonville, and that was certainly not for political reasons.

H. C. Fairbrother, M. D.,
Member State Board of Charities.

[We do not question the good faith of the author of this letter. As to the editorials in the **Illinois State Medical Journal,** we know nothing of their "animus" nor of the "circumstances" under which they were written. They appeared in the editorial columns of a highly respectable medical journal, and as we recall, they were warmly commended at the time by the leading Republican daily of Chicago, and were indorsed in the issue of The Journal, Feb. 20, 1904, because they semed to us to show, without personality or partisanship, the evil effect of political influence on a body of institutions whose directing spirit should be purely that of medical science.

The writer of the above letter states that he has no knowledge of any defects in the Illinois institutions, but expresses an admirable willingness to remedy them if any can be shown to him. It would be no difficult task to do this. The subordination of the Illinois institutions to party politics has been so evident that it is now a public issue in the state, and neither party dared to frame a platform this year without a plank demanding a merit system for the appointments to these institutions. A powerful voluntary organization of representative men

throughout the state has been formed for the express purpose of securing a state civil service law, and, as its reports will show, the primary need of this law was found in the condition of the state institutions. For the past eleven years, since the inauguration of the spoils system in 1893, at least 90 per cent of the offices, over 2,500 in number, in the state charitable and penal institutions, have been used for the payment of political debts or the purchase of political power. This system has naturally resulted in a deterioration in the management of our institutions. At the present time, in at least nine cases out of ten, fitness and experience combined have no influence in obtaining a position even in the insane hospitals.

There is one respect in which the institutions of Illinois do not compare favorably with "other institutions for the insane in this country." There is no governing body whose members are appointed and hold office in a way that makes it a proper body to hear complaints and investigate charges. The State Board of Charities is appointed by the same head who appoints the superintendent and chief officers of the various institutions, and as a consequence they are naturally inclined in all investigations to shield the management rather than to protect the inmate. For specific instances we may point to the Kankakee investigation, to the Elgin investigation, and to the attempted investigation of the Illinois Industrial Home for the Blind. It is fair to say that the instances referred to occurred before Dr. Fairbrother's very recent appointment to the board. For details we refer him to the "Plea for a State Merit Law" published by the Illinois Civil Service Association. That Illinois has lost the good name she once boasted of is shown by the fact that a commission appointed a few years ago by the governor of Pennsylvania to visit the various state charitable institutions and report on the same, passed through Illinois, stating in a personal interview with the representatives of the press in Chicago that they could learn nothing from the Illinois state charitable institutions, as they were among the lowest in point of efficiency.

Our correspondent questions our assertion as to "the loss to the state of eminent medical men" and says he knows of but one change in superintendents in the "present administration." We can not state too emphatically that we intend no reflection on the "present administration" of Illinois or of any other state. **The Journal** does not lend itself to partisan politics, nor does it hold any one administration responsible for the general situation, but it has been repeatedly pointed out that political control of public medical charities under any administration always has been and always will be disastrous.

We are sorry to say that, unlike our correspondent, we are able to recall a considerable list of excellent alienists who by various "methods of elimination" have been removed from the service of Illinois since 1893, when the period of political control set in. Among these are a pathologist of national reputation, the successful heads of three large institutions in other states, the superintendent of another public insane asylum which is now among the most progressive in America, and others equally meritorious but less conspicuous.

We would remind our critic that the points mentioned in this letter are not the only ones in which we have a right to demand a high standard for our insane asylums. Let him compare the medical, surgical and laboratory work in the asylums of Illinois with that carried on now in New York, Minnesota, Michigan and Ohio—the actual volume of scientific, clinical and pathologic work as evidenced by publications in the current literature. Cleanliness and kind treatment are certainly necessary, but the twentieth century has advanced beyond these points, and so long as mechanical restraint still obtains in our asylums, so long as they still retain the "Utica crib," and so long as they fail to keep up with the march of modern psychiatry, so long shall we be justified in our criticism of them.—Editor.]

HOME FOR CONSUMPTIVES FRAUD.

Evidently a number of schemes to defraud the public through fraudulent hospitals are in existence. One of the latest exposures was made recently in Chicago. The daily press of that city report the following:

The testimony of four women who, in the guise of nuns, it is said, have been soliciting subscriptions for an alleged consumptives' home, may lead to further investigation of similar institutions by the police. The home for which the money was collected was conducted by William F. Maharg, a former city chemist. It was located at 954 North Clark street.

Maharg was fined $100 by Justice Mayer. The women arraigned on charges of disorderly conduct were: Mrs. Ella Burkhardt, 1009 Wilcox avenue; Theresa Murphy, 12 Hill street; Mrs. Hilda Martin, 119 West Van Buren street; and Mrs. Ella Kluer, 119 West Van Buren street.

None of the appurtenances of a hospital was found at the Maharg house.

"There was only a table and a telephone," said Inspector Shippy. "Although the women say they were paid $2 a day, I have reason to believe they received a commission on the collections."

GREEN SISTERS OF CHARITY.

Several times during the past few months two women dressed in "loud" green and white costumes made to simulate the garb of a nursing sisterhood have paraded the streets of Springfield seeking aid for an epileptic hospital in or near Chicago. These persons or others similarly dressed have been seen on the Pike at the St. Louis exposition. It is said that no such institution, as they claim to represent, exists and members of the profession in other parts of the State would do well to give them a wide berth in their communities and should warn the laity against them.

Correspondence.

DR. BRIDGES OFFERS HIS AID.

Stonington, Ill., Oct. 8, 1904.

Dr. Geo. N. Kreider,
Springfield, Ill.

Dear Doctor: I have just read in the Illinois Medical Journal the circular letter appointing a committee on Promotion of Non-Medical Citizens, with interest. And you ask if you may use my name in this connection. I will only be too glad to help along so much needed an enterprise as this.

I don't think we should sit with folded hands while this great army of patients is dying with tuberculosis.

Yours respectively,
W. T. Bridges.

LOOK OUT FOR THE IMPOSTOR.

New York, Oct. 12, 1904.

To the Editor of the Illinois Medical Journal

Sir: We are informed by a physician in Elroy, Wis., that a person purporting to be an agent of ours has obtained money from him on the representation that we would send our Formalin Lamp as a free sample to any doctor who pays the transportation charges.

The man is not in our employ and is an impostor. As he may be victimizing the profession extensively, we would appreciate your kindness to warn your readers through your columns. None of our representatives would ask for or accept money from the physicians on whom they call, and any one who claims to be our agent and does so is a fraud.

Yours respectfully,
Schering & Glatz.

THE OTTAWA TENT COLONY.

To the Editor:

The success thus far attained in the Ottawa Tent Colony for the treatment of tuberculosis has placed the enterprise well beyond the experimental stage. Sufficient time has not yet elapsed to report any cures, but the results have been fully equal to those obtained in the same length of time in other sanatoria.

The treatment is out-of-door life, a carefully selected diet, regulation of exercise and medication for the improvement of nutrition. A marked improvement has been observed in all stages of the disease, but in the early cases the results are most satisfactory. The patients for the most part are cheerful and contented with their surroundings. As a rule they accept uncomplainingly the primitive life which the treatment imposes. The greatest difficulty experienced is to hold some of them long enough to make the improvement permanent.

The colony will be continued throughout the winter. Patients whose condition makes it desirable to live in tents will be recommended to do so. Those who should not, or will not, will be comfortably housed. A tent is intended simply as a sleeping apartment. Tent life as carried out for the treatment of tuberculosis soon becomes thoroughly enjoyable. Before beginning such a life patients almost invariably entertain exaggerated ideas of its dangers and inconveniences. A short trial soon dispels this fear, and they are with difficulty induced to return to an indoor life. It should be understood, however, that during the winter patients will be given their choice, and those who object to living in a tent will be comfortably housed in such a manner as will comply with the essential principles of the present-day treatment. Experience teaches that the results are even better in winter than in summer, therefore physicians should not hesitate about sending patients during the winter months. The tubercular patient, when well fed and warmly clad, feels the exhilarating effects of cold weather quite as much as the normal person, but will not avail himself of these valuable aids in the restoration of health except when under careful supervision.

The Ottawa Tent Colony is not a business enterprise. It was not established for profit, nor as a charity, but on as nearly a self-supporting basis as possible—all medical services being gratuitous—in order to demonstrate the

primary fact that tuberculosis can be cured in our own climate. To this end the co-operation of physicians is earnestly solicited. They are cordially invited to visit the colony and see for themselves the good work we are doing. If they can not accept this invitation any information desired will be cheerfully given.

J. W. Pettit,
Chairman Tuberculosis Committee,
Illinois State Medical Society.

NO METHYL ALCOHOL IN THE JAMAICA GINGER.

Springfield, October 17, 1904.

The Editor, Illinois Medical Journal,
Springfield, Ill.

Dear Sir—Referring to the communication in the Journal of last August, under the caption "Death from Poisoning by Methyl Alcohol," I beg to say that, at the request of the State Board of Health, I had a bottle of the Jamaica ginger referred to purchased in open market and a careful analysis made of the contents.

The analysis showed no trace of methyl alcohol, although, as was to be expected, ethyl alcohol was found.

Very respectfully,
F. C. Dodds,
Secretary State Board of Pharmacy.

DR. PETTIT RECEIVES OFFER OF AID.

Ottawa, Ill., Oct. 19, 1904.

Dr. G. N. Kreider,
Springfield, Ill.

My dear Doctor—I apprehend that the most critical point in the history of the Tent Colony will be about the beginning of winter. I fear that many patients will hesitate about making application for treatment through a misunderstanding of what it will mean in the winter time. Therefore, it will be necessary to emphasize the fact that patients will not only be properly cared for, but that the success of treatment is greater in winter than in summer. If you can find a place for the enclosed announcement, you will confer a favor by doing so.

Yours fraternally, J. W. Pettit.

Chicago, Ill., Oct. 12, 1904.

Dr. Jas. W. Pettit,
Ottawa, Ill.

Dear Doctor—I take the liberty of enclosing a clipping from the "Daily News," of the 7th inst., which you may have already seen. That I am vitally interested in such matters I need not say to you. My purpose in writing you, however, is for this object, viz.: that you permit me to offer my services as a member of your "committee on promotion." I am in a position to obtain for you both money and men, the former as "munitions of war" and the latter as "the men behind the guns," to indulge in the language of these war-like times. I hope you will let me do something in this cause and let me get in touch with you very soon.

Hoping to receive an early and favorable reply, I am

Very sincerely,
H. Alex. Lipsky.
3142 Lake Park Avenue.

October 14, 1904.

Dr. Geo. N. Kreider, Editor,
Springfield, Ill.

Dear Dr. Kreider—I enclose you a letter written to me by Dr. Phifer of Shumway recently, relative to my article "A Matter for Consideration," published in the correspondence columns of the October issue of the Illinois Medical Journal.

This letter should be read by all of our society members; having obtained Dr. Phifer's permission to have it published, I most respectfully ask you to publish it in the correspondence columns of the November issue of our State Journal.

Does not the doctor cite a deplorable state of affairs? Do you suppose a worse state of affairs exists in the state?

Thanking you, I am,
Fraternally yours,
Dr. F. Buckmaster.

P. S.—Dr. Phifer's letter to me follows:

Shumway, Ill., Oct. 12, 1904.

Dr. F. Buckmaster,
Altamont, Ill.

Dear doctor—Since I came home I have looked up your article in the Illinois State Medical Journal, and have read it carefully. The article makes clear the point in your remarks yesterday, and I endorse the sentiments fully. I know of one physician who

is pushing a patent kidney medicine of his own patenting. He holds the position of examiner for the———. I do not well know how the company can trust its interests in his hands, as I feel sure that it is a safe bet that he cannot make the most simple urinalysis for albumen or sugar. The fact that he is not regular should bring him and all such within the scope of your paper and should be acted upon.

I am with you in any more move you make along this line, and any other, for the elevation of the profession.

Wishing you success, I am,

Truly yours,

J. N. Phifer.

PROTEST TO THE UNIVERSITY OF MICHIGAN.

Detroit, Mich., October, 1904.

Dear Doctor—In the interest of good citizenship and of the medical profession, I ask you for your earnest and energetic assistance in the following matter:

The Medical Faculty of the University of Michigan are required to furnish gratuitous medical and surgical service to all people of this or other states, regardless of their financial ability to pay for such service. Such a ruling on the part of the Board of Regents of the University of Michigan is most unjust and injurious in the extreme. That this ruling should be reconsidered is evident.

It appears, however, that the most vigorous protest of the medical profession within the radius of the influence of the University of Michigan will be required to attain this object. Therefore, I ask you to immediately write a vigorous letter to each member of the Board of Regents of the University of Michigan, viz.:

Hon. James B. Angell, LL.D., Ann Arbor, Mich.

Hon. Charles D. Lawton, Lawton, Mich.

Hon. Henry S. Dean, Ann Arbor, Mich.

Hon. Arthur Hill, Saginaw, Mich.

Hon. Levi L. Barbour, Buhl Blk., Detroit, Mich.

Hon. Henry W. Carey, Manistee, Mich.

Hon. Frank W. Fletcher, Alpena, Mich.

Hon. Loyal E. Knappen, Grand Rapids, Mich.

Hon. Peter White, Marquette, Mich.

Furthermore, to ask your County Society to pass a resolution to that effect and to have the Secretary forward it to the same gentlemen, at once, and to use all other influence in your power to re-establish sound conditions.

The assistance of the County Auxiliaries of Wisconsin, Illinois, Indiana, Ohio and Michigan is requested simultaneously.

Sincerely yours,

Emil Amberg,

Michigan Member of the National Legislative Council of the American Medical Association.

News Items.

Dr. Jas. Warren Vanderslice has returned from Europe and resumed practice. His office is in Medinah Temple, 183 Jackson boulevard, Chicago, and his residence, 221 North 64th ave. Oak Park.

The New Swedish-American Hospital Association has been inaugurated for the establishment of a hospital on the South Side, Chicago. Among the promoters are: Rev. Eric Rosen, 5915 Emerald ave.; Rev. A. L. Mystrom, 5742 Aberdeen st.; Carl Lundberg, real estate broker, 5915 S. Halsted st.; C. F. Palmquist, 6111 S. Halsted st.; O. C. Peterson, lawyer, 79 Dearborn st.; Adolph Anderson, life insurance, 5441 5th ave.; Dr. C. F. P. Korssell, 5609 Indiana ave.; Ernest Bihl, 419th st., and Dr. W. A. Peterson, 3046 Wentworth ave.

As a rule all hospitals are charitable institutions and managed on that plan, but the Swedish-American Hospital Association is a stock company organized for the profit of its stockholders, and by our adopted plan we are assured that there will be paid a substantial interest on the capital invested. There will be a separate and independent department for charity work, which will be managed under an endowment fund plan, and with that our organization will have nothing to do. So, while our hospital will accept charity cases as most other hospitals do, and turn no unfortunate away, yet that work will be entirely separate from our organization. The hospital will be large and commodious, first class and modern in all respects. Ample funds will be provided so that the enterprise will be a credit to its promoters and stockholders.

Dr. George F. Butler has severed his connection with the Alma Springs Sanitarium, at Alma, Michigan, where for nearly five years he has been medical superintendent, and has re-

turned to Chicago where he will henceforth limit his practice strictly to internal medicine. He will fill the chairs of professor of Therapeutics in the College of Physicians and Surgeons, and Professor of Medicine in the Dearborn Medical College; he has also been appointed as one of the attending physicians in the Samaritan Hospital. Dr. Butler will continue to edit and publish his magazine "How to Live," and it is understood that he has under way another medical work for a Philadelphia medical book publisher.

Dr. Howard A. Kelly of Baltimore was the guest of Dr. Clifford U. Collins at Peoria, Sept. 22d and 23d. A general reception to the profession was held at the parlors of the St. Francis Hospital, Sept. 22d, between four and five in the afternoon. In the evening Dr. Collins gave a dinner in honor of Dr. Kelly at the National hotel. Dr. O. B. Will made an address in which he reviewed the career of the distinguished visitor. Dr. Kelly responded and complimented Peoria on her well-equipped hospitals and commented on the harmony that seemed to exist among the members of the profession there. Dr. Kelly held a clinic at the St. Francis Hospital at nine o'clock on the morning of the 23d. In the afternoon he left for St. Louis where he presided over the section of Gynecology of the Medical Department of the Congress of Arts and Sciences.

Dr. T. O. Hardesty has moved from Kampsville, Ill., to Jacksonville, Ill., leaving a good opening at Kampsville for some good doctor.

Dr. W. A. Kuflewski of the Chicago school board has presented resolutions to that board prescribing new methods for sweeping and cleaning public schoolrooms, claiming that the health of every pupil is daily placed in jeopardy by the system now in use:

"The insanitary practice of sweeping the schoolroom floors without wetting them and with the windows closed, and the filling of rooms with clouds of chalk dust every time the blackboards are cleaned, place on every child the danger of falling a victim of pulmonary disease," said Dr. Kuflewski. "Dust causes the spreading of disease, especially of tuberculosis."

Favors Use of Chemicals.

The resolutions of Dr. Kuflewski made the following recommendations:

That the floors of all public schoolrooms be covered with sawdust wet with a solution of bichloride in the proportion of 1 to 4,000, and then thoroughly swept.

That all windows shall be wide open during the sweeping and cleaning of schoolrooms, provided the weather will permit.

That all blackboards be wiped off with wet sponges to prevent the spreading of the chalk dust, which is exceedingly injurious to the lung tissues.

That all furniture and woodwork be wiped off at least once a month with a solution of bichloride.

That all windows and doors be left open during intermission, except in inclement weather.

Taking the regular course, the resolution was referred to the buildings and grounds committee.

Dr. J. T. Little of Bloomington, was elected Secretary-Treasurer of the Illinois Association of Union Ex-Prisoners of war at the meeting recently held at Decatur.

Dr. G. Frank Lydston of Chicago, has purchased from Mrs. Bertha Cockburn the new apartment at 4915-4925 Calumet avenue, 150x130 feet of ground, for $85,000, with incumbrance of $36,000. The building contains eighteen apartments of six rooms each. In part payment the purchaser conveyed to Mrs. Cockburn the residence property at 2817 Indiana avenue and two vacant tracts of land at Edgecomb place and Evanston avenue valued at $45,000.

Dr. E. C. Dudley and Miss Dorothy Dudley, 3319 Indiana avenue, have returned from the Pacific coast, where they spent nine weeks.

Dr. Joseph Zeisler has returned from Europe after an absence of two months.

Uncle Sam Takes a Hand.

It is only natural that the action of the United States government, mentioned in the article published below, from "The Boston Transcript," which took place shortly after the publication of the article on "The 'Patent-Medicine' Curse" in the May issue of The Ladies' Home Journal, should be encouraging to us in a special degree:

"A vigorous crusade of almost gigantic proportions, and calculated to eliminate from among American advertised industries one of the most extensive frauds ever practiced, has been undertaken by the post office department. With the assistance of government scientists the department seeks to bar from the use of the mails the host of patent medicine concerns and exploiters of proprietary medicines and nostrums which chemical analyses show are incapable of performing the wonderful cures claimed for them. On the list are preparations which purport to cure dipsomania, yet contain large percentages of alcohol, some of which are vended as harmless but are found to be deleterious; others which are advertised as 'consumption cures,' but contain no recognized remedy for tuberculosis, and still others which are sold as restoratives of vitality, but which are entirely incapable of accomplishing any such result. Although this work is still in the initiatory stage, sufficient evidence has already been discovered to warrant the conclusion that many of the widely advertised patent remedies are rank frauds, which cannot be of any benefit whatever, too often relying on alcohol to produce temporary exhilaration and likely to lead eventually to chronic alcoholism."

"Governmental control of the mails makes the post office department absolute master of the situation, with power to exclude from the use of the postal service every letter addressed to and every circular sent out by the concern which, in the opinion of the postmaster-general,

is conducting a fraudulent business, and to go even further and exclude from passage through the mails every newspaper or other publication which, once a fraud order has been issued, persists in carrying the advertisement of the concern so excluded. No legal proceedings are necessary to accomplish these ends, and the entire burden of proof rests on the proprietor of the patent medicine or the concern to which the use of the public mails was forbidden. For this reason, it is believed, it will not prove difficult to drive out of business the individuals and institutions which seek to delude and defraud the public, while the department, after careful investigation of the subject, is convinced that the 'patent medicine fake' is a greater humbug than any of the 'get-rich-quick' concerns which have thus far been excluded from the use of the mails."

The depth of deceit practiced by proprietors of alleged patent medicines and nostrums, and the character of the diseases which they pretend to cure, especially that class which yields the greatest profit, are such as to preclude description in the public prints, and must be left for discussion in scientific publications; but it may be said that they are appalling, and, unless substantiated by indubitable evidence, would be beyond credence. But it is not to any class of nostrums that the department has directed its attention or in which it has found fraud to exist. Out of the first sixteen different remedies analyzed by the Department of Agriculture, at the request of the post office department, only one was found to possess any merit whatever in such cases as it was advertised to cure, and the one which possessed merit was only what a practicing physician would have prescribed under known conditions, although the physician would doubtless first have pains to ascertain if the remedy was required."

"An explanation of the numerous testimonials which are published as proving the efficacy of the various 'remedies' is believed to be afforded by special analyses conducted solely to ascertain the per cent. of alcohol. The administration of more or less dilute alcohol in small doses at regular intervals will, it is explained, produce temporary exhilaration, and the victim will for a time believe that extraordinary results have been achieved by the so-called remedy. Some of these analyses are interesting."

"The remedies analyzed were found to contain from seven to forty-five per cent. of alcohol. The post office department has not entered upon this crusade without careful thought and preparation, and has been assured by the Department of Justice that even if those concerns excluded from the use of the mails seek to compel a reversal of the postmaster-general's decision in the courts, such suits will prove unavailing. The postmaster-general has been advised that a decision of the United States Supreme Court, in the case of a Chicago afternoon paper published in 1895, carries with it full warrant for the course now proposed by the department, and that there is no fear that the courts will not sustain the action of the postmaster-general in excluding from the mails any correspondence addressed by or to any concern which, in his estimation, is guilty of fraudulent dealing, misrepresentation, improper labeling, etc., and also that he can go further and exclude from the mails all publications which may carry the advertisements of such concerns as have come under the ban."

Dr. C. R. Bell has located at Thayer, Macoupin County.

Dr. A. T. Bartlett the oldest practitioner of Virden has finally closed his office and removed to St. Louis. Dr. Bartlett has practiced 39 years in Virden and served over three years as surgeon during the war of the Rebellion. He will be greatly missed from Illinois.

Dr. John P. Matthews of Carlinville who was seriously ill for several years, has so far recovered his strength that he is able to attend to office and consultation practice. He retains his mentality with remarkable vigor.

The Staff of the Cook County Hospital has been reduced to sixty-five members and a merit test has been provided for appointment.

The action was taken at the suggestion of President Foreman, and is intended to reform what are recognized as serious abuses.

Previously the only limit to the size of this staff has been the judgment of the county board, which selected it. There now are 113 physicians and surgeons. No pay goes with the appointments, but they are sought eagerly, both on account of the practice which they afford and the standing in the profession that they carry with them. With the exception of a few prominent surgeons and physicians who were named of necessity, most of the appointments have been made for political reasons.

Declares Staff Is Too Large.

"The attending staff at the county hospital," wrote President Foreman to the board, "has grown so large as to impair its efficiency and work a hardship on the doctors who stand ready to render their best services to the county."

On receipt of the communication the commissioners, Flannigan alone voting in the negative, adopted this order:

"Resolved, That hereby there are created the following positions, to be filled by competitive examination conducted by a competent examining board under the direction of the civil service commission and in accordance with the provisions of the civil service law:

	Allopathy.	Homeopathy.	Eclectic.
Surgical	12	3	3
Medical	8	2	2
Children's department	4	1	1
Contagious and skin diseases	4	1	1
Obstetrics	4	1	1
Eye, ear, nose, throat	4	1	1
Nervous diseases	4	1	1
Totals	40	10	10

General science—Dentist, 1; pathologists, in addition to resident pathologist, 2; pathological chemist, 1; X-Ray operator, 1.

Prominent Physicians on List.

How some of the best known physicians and surgeons of Chicago will fare in the examination is an interesting question. Present members of the staff, who must take it if they are to become a part of the contemplated permanent staff, include John B. Murphy, Frank Billings, William E. Quine, D. H. Babcock, Daniel R. Brower, Sydney Kuh, Frank B. Earle, W. A. Evans, L. Hektoen, G. F. Hawley, George W. McFatrich, William J. Butler, W. L. Baum, and Allen T. Haight.

The board also provided for an eligible list for internes at the County hospital and Dunning, from which members are to be taken as they are wanted.

Dr. Howe has changed his location from Rockford to Streator.

Dr. R. L. Smith has moved from Chicago to Lexington.

Dr. H. A. White, formerly of St. Charles has located in Clinton, Iowa.

Dr. Tafel of Chicago Heights has removed to Phoenix, Ariz.

Dr. C. H. Francis of Chicago is taking post graduate work in Edinburg.

Dr. Harry Bennett has located in Litchfield with his father.

Dr. Dolton and Wife have located in Barrington.

Dr. Ralph Herbert has located at Poplar Grove.

Dr. Ludwig of Kingston has located in Chicago.

Dr. Frank Stubblefield of Peoria was appointed assistant physician in charge of the north annex at the Central insane hospital, Jacksonville, vice Dr. E. E. Peters.

Dr. H. N. Russell of Farmington has located in Lawrence, Kans.

Dr. Blair of Monmouth has located in Lawrence, Kans.

Dr. John Edwin Rhodes and his family, who spent August at North Manitou Island, Mich., has returned to Chicago.

The State Board of Health has appointed R. B. Charles, Charles Messenger and Hugh Riley as deputy lodging house inspectors in Chicago.

Dr. and Mrs. Edwin B. Tuteur, 3645 Grand boulevard, have returned to the city after a month's absence on a vacation.

Dr. and Mrs. Thos. J. Jackson and daughter, 521 Thirty-ninth st., have sailed for Europe.

Dr. Vida A. Latham of Chicago was elected vice president of the American Microscopical society.

Dr. G. O. Calhoun has moved from Farmingdale to Lowder.

Dr. Frank L. Mueller and his wife, 59 West Foster avenue, while driving in Lincoln Avenue, Chicago, were thrown from their buggy by a collision with a north bound Lincoln Avenue car and sustained injuries that may result fatally.

Dr. John S. Organ was nominated for representative for the first senatorial district.

Dr. Chas. H. Neilson of the University of Chicago has been elected associate professor of Physiology in the University of St. Louis.

The North Central Illinois Medical Ass'n will hold its regular annual (31st) meeting at Pontiac, Dec. 6th and 7th. The membership of this Society is limited to Bureau, De Kalb, Grundy, Kendall, La Salle, Lee, Livingston, Marshall, Putnam, Whiteside, Woodford and adjoining counties. The meetings heretofore held at Pontiac have been largely attended and enjoyable. Dr. Geo. A. Dicus of Streator is secretary-treasurer.

Dr. E. E. Faulkner who has practiced in Chicago has returned to Des Moines, Iowa, his former location.

Dr. D. H. R. Patton has removed his office from 1558 Wabash Ave., to 2204 Michigan Ave., S. W. Cor. of 22d St., Chicago.

The Englewood Union Hospital is projecting a new building. The institution was established in January, 1893, and was first located on Sixty-Ninth street, near Stewart avenue, in a two-flat building. The next fall it was moved into a twelve-room house on Wentworth avenue and remained there until the Spring of 1894, when it was moved to 840 West Sixty-Fourth street into a six-flat building containing fifty-four rooms, where the institution now is.

The cause of moving each time was the need of more room, and another move must be made because of insufficient room to take care of the patients. The growth of the hospital has been marvelous, starting in a very small way, growing larger each year, until the last year there were 920 patients, giving 12,715 days of hospital service.

The gross earnings of the Union Hospital this year were $24,972.40. The amount of charity work done during the year was $5,361.16. The quarters are now too small and the building is not convenient for the work; so in order to take care of the increase of both pay and charity patients it is necessary to have a larger building.

The hospital authorities urge and request the people who are interested in the public welfare of Englewood to visit the hospital, look over the work, and express opinions as to what ought to be done. It is the desire of the hospital board to do that which the people want, and they are now looking for an expression of public sentiment. The meeting called at the First Methodist Episcopal church, Sixty-Fourth street and Stewart avenue, on Sunday, Oct. 9th was enthusiastic and aroused public sentiment. Various churches, social clubs and fraternal orders were requested and the personal and general interest manifested was most encouraging.

It is the intention of the Board of Managers to issue $80,000 in bonds of various denominations as low as $25, bearing 4 per cent interest, payable semi-annually, and build a large and well-equipped hospital from the proceeds of the sale of these bonds. The ground has already been secured and is 150 feet by 240, situated half way between Sixty-Third place and Sixty-Fourth street, and extending all the way through from Emerald avenue to Union avenue.

The Promotion Committee is composed of the following men: I. W. Cranmer, chairman; Joseph Uhrig, secretary; Orville T. Bright, J. H. Brown and the Rev. J. A. Randthaler.

Dr. Harry F. Bennett, who for the past ten years has been practicing his profession in Chicago, has located in Litchfield and will practice with his father, Dr. R. F. Bennett.

Mr. C. J. Curless left Meredosia for Lacrosse, Wis., where he goes to be operated on for appendicitis.

Dr. Geo. E. Baxter of Chicago, has been visiting relatives in Jacksonville, Griggsville and New London, Mo.

Prof. Koch, at present in Paris, proposes to make Paris his permanent home. He will visit German South Africa on a government mission shortly.

Third Annual Report of the Civil Service Reform Committee of the Illinois Federation of Women's Clubs, October, 1904.

Although there is much that is important and interesting in a wider view of our subject, yet we are still compelled to keep our attention fixed on our first and nearest duty and remind you that Illinois has not yet obtained a state merit law. However, when we review the last four years, we find abundant cause for encouragement.

Four Years Ago at the annual meeting a speaker timidly addressed you on the need of reform in the civil service of Illinois, and hesitatingly said:

"I consider the subject at once the most important and the most puzzling which could come before any meeting of Illinois citizens at this time. What can be done? I confess I do not know. Neither party has managers who are willing, apparently, to consider these questions: party platforms are silent; men's clubs and organizations say nothing; the press says nothing."

At that time it was true that neither of the great political parties would notice the question of the State civil service and that the persons most interested in the reform dared not ask for a State law lest it provoke an attack on the Chicago law.

Three Years Ago in place of the timidity of a twelvemonth earlier, the Federation enthusiastically passed the following resolution:

"**Resolved,** that the Federation of Women's clubs urge that every effort possible be made to arouse public attention to the vital necessity of the entire separation of the public business of the State from the private interest of political parties, by the enactment and enforcement of an effective merit law, applicable, not only to the State Charitable and Correctional institutions, but to all departments of the public service."

Two Years Ago the Federation published and circulated **An Appeal for a State Merit Law,** which showed by a plain statement of indisputable facts how our State charitable institutions notably, the Insane Asylums, the Factory Inspection, and other State activities are injured by political control. This pamphlet was purchased in a large quantity and circulated also by the Illinois State Civil Service Reform League. At about the same time the Illinois State Civil Service Reform League—a body of representative men throughout the State, was organized for the purpose of securing a State Merit Law. Its work has been courageous, patient and untiring.

One Year Ago your Committee's Third Annual Report was made and circulated by the Federation, and also by the Illinois State Civil Service Reform League.

Now we find that in 1904 no political party platform in Illinois ignores the popular demand for a merit law and for improvement in administering the State institutions.

We find the representative press unanimous in urging this reform. We find the Illinois Civil Service Reform League powerfully organized to ascertain facts, and to bring the matter before the public and before the legislature. We find both candidates for Governor publicly committed to the reform.

Perhaps no more convincing indication of the general recognition of the importance of the reform are asking could be found than is shown in an editorial which appeared September 17, 1904, in the Journal of the American Medical Association, entitled, **"State Supervision of Public and Private Care of the Insane."**

We quote it below, because:—

1. It is from a national standpoint and shows how general is the problem with which Illinois is struggling, and thus enables us to realize that whatever we can do toward its solution will not only serve the helpless wards of Illinois, but of the whole country as well.

2. While this article considers only the insane, yet all that can be said of the importance of divorcing their care from politics applies equally to the care of every feeble or wayward son or daughter of the State.

3. This editorial shows us what the attitude of the best medical minds must be toward this question—a most important point for the laity to understand.

"The largest single enterprise in which the individual states in our country engage is the care of the insane. The State of New York has an insane population of 23,000, cared for at an annual expense to the state of $5,000,000, and, although many states have a smaller number in proportion to their inhabitants, others have a still greater. California, for instance, has 6,000 insane—a number larger in proportion to her population than any other state.

Everyone must have observed that there is at the present time a distinct renewal of public interest in this function of the state, a decided tendency to question the methods usually employed. Public care of the insane is managed in several different ways. California and New York, for instance, maintain all their public wards in state institutions; Wisconsin has a unique system of state subsidy to county asylums, while Illinois and most of the states divide their insane between state asylums and county poor-houses, the latter being theoretically for the chronic cases, although practically this is far from the rule. It may be safely stated that the tendency is toward exclusive

state care, as the state asylums are superior in equipment and in medical care, and the method is comparatively simple and compact. Adequate supervision over county institutions is difficult, if not impossible. The question, however, is far from being solved by so simple an expedient as a change from county to state asylums. It is clear that a malady which entails on its victims the double disabilities inflicted by insanity—mental and material helplessness—requires special safeguards, and consequently there has grown up everywhere a system more or less effective of public supervision of the care of the insane.

Scotland is frequently pointed out as the country which has the most completely organized method of supervision—a method which for elasticity and effectiveness is unexcelled. The Scotch system culminates in the Board of Lunacy Commissioners, consisting of five men, two unpaid and three salaried, the latter being physicians who hold their office during good behavior until the age of retirement at sixty-two.

Every insane person in Scotland is under the care and protection of this board, whether in a public or private institution, whether placed in a private family at state expense, or living with his own relatives. The board has various deputies who act as visitors, but a large amount of personal supervision and medical examination is expected of the members themselves, as well as the usual supervisory and advisory duties which are ascribed by law to the State Boards of Charities in this country.

Without going into the details of the Scotch system, it can be seen that there is no wide difference between it and the one frequently employed in the United States, and, indeed, at the time it was adopted there is reason to believe that the framers of it received certain suggestions from our methods. At that time, in the middle of the last century, the public care of the insane was a matter of much concern, and many asylums were building in our eastern states, which attracted visits from persons from abroad, men interested in learning American methods. Yet now, while Scotland boasts an almost entirely satisfactory system, our own country is conscious of a growing dissatisfaction, not only in the condition of many individual asylums, but in the whole method of management; a dissatisfaction which expresses itself in more or less vague efforts at reform, in substituting administrative boards for supervisory bodies, boards of control for boards of charities. We are not interested at this moment in judging between the relative merits of these different plans; to our minds the root of the vague distrust so generally felt in this country lies far deeper and can never be eradicated by superficial reforms.

Bluntly speaking, the State political organizations of both parties have laid hold of the State institutions for the insane, and have used the appointments and appropriations for party ends, more or less extensively. In some states this exploitation has not been necessary for party success, and the institutions have perhaps suffered little from it, but in others it has assumed the proportions of a plague. Occasionally the institutions have been rescued by determined individual effort, as when the lamented Governor Mount of Indiana, by his personal will, pulled the asylums out of the hands of the politicians; but Indiana herself is a melancholy proof of the evanescent nature of a purely personal reform, since his successor has by no means shown the same spirit.

Illinois, whose institutions were once the pride of the Middle West, has become the most conspicuous instance of the ruin wrought by political interference in public affairs which should be subject to physicians and humanitarians alone. A recent series of editorials in the Illinois State Medical Journal has shown with indisputable clearness the fall of Illinois institutions, and the continued loss to the state of the most eminent men connected with them.

Perhaps no crueller sacrifice has been demanded by the political Moloch than that of Dr. Runge, superintendent of the St. Louis City Hospital. Although his scientific and humane management had given him a national reputation, he was compelled to resign a few months ago, and his untimely death from pneumonia, which followed almost immediately, is believed to be in part attributable to the mental strain entailed by his heroic but futile struggle against the politicians.

We may as well face the truth that there is a deep-seated evil which can not be eradicated by such superficial remedies as changing the form or the name of the power of boards, nor even by the mere passing of a merit law. The efforts of the profession and of the public must be permanently enlisted in demanding genuine devotion and expert ability in those who compose these boards.

Above all the appointments in the asylums must be made on the basis of merit, with the permanency which is found in similar positions abroad, and which is the sine qua non of good service. These conditions the public must understand, and these limitations the politicians must respect if the care of the insane in America is to keep pace with the general advance of humanitarian effort."

Have we not shown enough growth in public opinion to encourage us? While this change is attributed to no one agency, but chiefly to the stern logic of events, yet may we not hope that our efforts have not been wholly useless, and do we not find ground for pressing steadily on?

Again let us remind ourselves that we are in honor bound to work for a State Merit Law because we have been instrumental for a dozen years in securing humanitarian laws and institutions which become a cruelty to their beneficiaries and a reproach to us unless they are administered in the spirit of a noble citizenship.

And finally we are bound to work for a State Merit Law, because all the interests and activities of a great State are at the bottom one in purpose,—to secure the welfare and happiness of its citizens. There is not anywhere a needle's point of room for political intrigue and exploitation in the edifice of the good State. As was said above, "the mere passing of a Merit law"

is not enough, yet since we shall have in it an expression of the public will, and a higher standard of public conscience, to labor for it is certainly our immediate duty.

Respectfully submitted,
Henriette G. Frank, Chairman.
Mrs. Wm. S. Mack,
Mrs. Claribel Schmitt,
Mrs. Luther M. Flagg,
Mrs. Julia M. Dunn,
Mrs. Clara P. Bourland,
Mrs. E. S. Johnson,
Mrs. Mary I. Rexford,
Mrs. S. M. Bickford,
Julia C. Lathrop, Secretary.

HONOR MEMORY OF DR. DAVIS.

Bishop Spalding Proposes a Memorial Meeting in Powers' Theater, to Be Held Annually.

At the service in memory of the late Dr. Nathan Smith Davis in Powers' theater Sunday afternoon, Oct. 23, it was proposed that the meetings be held annually under the auspices of the Chicago medical societies. The suggestion was made by Bishop Spalding of Peoria.

The theater was filled when Dr. J. B. Murphy called the meeting to order.

The Grace Methodist Episcopal church choir sang and Bishop Merrill offered the invocation. Dr. Frank Billings delivered a eulogy and Bishop Merrill said Dr. Davis was the great pioneer missionary physician of Illinois and the west.

Bishop Spalding spoke in part as follows:

"Dr. Davis laid the foundation of Mercy hospital. His vigorous mind and noble character taught him that prejudice is ignorance or imbecility, and that where suffering is to be relieved, where good is to be done, all except the blind or the perverse are drawn together to help and to cheer. When the Chicago Medical college was founded its more exacting requirements for admission and graduation could not but win the sympathy and approval of Dr. Davis, and, heedless of the loss and sacrifice, he resigned his chair at Rush to take one in the new institution, where he remained during forty years.

"Dr. Davis was one of the founders of the Northwestern university, the Chicago Academy of Science, the Chicago Historical society, the Illinois State Microscopical society, the Union College of Law, and the Washingtonian home."

MUST PAY FOR "SUGAR" PILLS.

Illinois Farmers Lose Case Against Chicago Medical Concern.

Bloomington, Oct. 23.—Much interest was taken throughout central Illinois this week in a case in Moultrie county, taken on a change of venue from Shelby. A decision was handed down by Judge Johns, which, if it stands the tests of the upper courts, will result in nearly 200 patrons of a Chicago medical institution that operated in central Illinois being compelled to pay for services rendered. The judge dissolved an injunction granted by Judge Ames in Shelby county restraining the Illinois State Medical and Surgical institute from disposing of $25,000 worth of promissory notes, said to have been given in payment for professional services. W. H. Truitt, a banker of Findlay, Ill., was made a party defendant in the suit, owing to the fact that he had purchased many of the notes.

The case is unique in that the complainants numbered 194 and claimed in their petition that they had been deceived with sugar pills. They asked the court to declare the notes given by them to the defendants to be null and void.

After the victory of the institute in the lower courts, through Judge Johns' decision, an appeal was taken to the appellate court, bond being furnished in the sum of $5,000.

Marriages and Deaths.

MARRIAGES.

Carlton S. Myers, M. D., to Miss Blanche Irwin, both of Chicago, Oct. 10.

William C. Spangenberg, M. D., and Miss Clara Adams, both of Chicago, September 15.

Charles Whittier Young, M. D., Chicago and Miss Olive Doyle, at Baltimore, September 15.

John Franklin Snyder, M. D., Monroe Center, Ill., to Miss Vernie Blanche Sheaff of Holcomb, Ill., September 21.

Frank A. Metcalf, M. D., to Miss Rebecca L. Day, both of Chicago, September 21.

Shepherd A. Ware, M. D., to Miss Clarice Duncan both of Springfield, Ill., August 15.

Francis D. Fletcher, M. D., Chatham, to Miss Leona A. Nuckolls of Auburn, Oct. 29.

Dr. Robert S. McCaughy of Hoopeston and Miss Josephine Culbertson, daughter of Dr. and Mrs. S. D. Culbertson, of Piper City, Oct. 20.

Mrs. McCaughey was born and raised in Piper City, where she was deservedly popular. She and her husband were classmates at Monmouth College. After a trip to Denver and St. Louis, they will be at home in Hoopeston.

Dr. J. F. Crowley, of La Salle, and Miss Margaret Henslee, of 4016 Michigan ave., Chicago, Oct. 19. They will journey to St. Louis and the eastern cities and return to La Salle Dec. 1.

White, Dr. W. J., formerly house surgeon at the Wabash Hospital, Springfield, now of Ashley, Ind., and Miss Marjorie Barker, of Springfield, Sept. 21.

McClanahan, A. C., M. D., Chicago to Miss Locky Fox of Portland, Ore., August 24.

Shallenberger, F. E., M. D., Canton, to Miss Kathryn Elsenfast of Peoria, August 17.

Wright, J. A., M. D., and Miss Nellie Thompson both of Fair Haven, Ill., at Clinton, Iowa, August 24.

Young, J. G., M. D., and Miss Mae Wells, both of Hickory Grove, Ill., at Keokuk, Iowa, August 31.

Allen, Wm. Gray, M. D., Chicago to Miss Amelia Harrison Arundale, at Bradford, Ill., Sept. 7.

Drosdowitz, Theo., M. D., Chicago to Miss Belle D. Hurwitz of New York at St. Louis, Mo., Sept. 5.

Mabry, W. C., M. D., Ft. Sheridan, Ill., to Miss Bessie Mayne of Salt Lake City, Utah, Sept. 7.

Cupler, R. C., M. D., and Mrs. Isabella Larkin, both of Chicago, September 1.

Brookshier, M. L., M. D., Graymount, Ill., to Miss Josephine Beier of Weldon, Ill., Sept. 7.

Claude F. Schrouts, M. D., of the Kankakee Eastern Hospital staff was married to Miss Jeanette Foster of Chicago, Sept. 14.

Samuel Burke, M. D., and Miss Mabel Signor, both of Chicago, October 1.

Arthur Newton Davis, M. D., formerly of Chicago, now of Berlin, Germany was married on Aug. 29th to Miss Helen Winnifred Proctor, 3238 Groveland ave., Chicago. The ceremony was in St. George's, Hanover Square, London, England.

Stephen Tyler Parsons, M. D., of Chicago was married to Miss Rachel Hutchinson at the Church of the Epiphany. The ceremony was performed at high noon by the Rev. John Henry Hopkins.

Ethan Allen Gray, M. D., of Chicago, was married to Miss Elsie Marie Baumann of 43 Pine Grove ave., Chicago. The ceremony was performed at the Church of Our Savior.

S. A. Ware, M. D., (colored) of Springfield, was married to Miss Clarice Duncan of Springfield, August 15. The marriage was only recently announced.

DEATHS.

Dr. C. M. Bowcock of Springfield has returned from Clarksburg, W. Va., where he went August 30, to attend the funeral of his father, Dr. James M. Bowcock of that place. Dr. Bowcock, Sr., had practiced medicine in Clarksburg since 1856, being graduated from Jefferson of Philadelphia in 1850. During the civil war he was a staunch union man and established the first hospital in that section when he was acting as contract surgeon in the government service. Dr. Bowcock had visited his son in Springfield and was well known to many physicians of this state who will regret to learn of his death.

Dr. Wm. B. Rehling Ruch, Alhambra, died at the home of his mother in waterloo, Iowa, July 28, aged 20 years.

Dr. Anna M. Shattock, died Aug. 18, at the home of her daughter, Dr. Helen Parker, in Marshall, Mich., aged 72 years.

Follett, Orville, M. D., died at his home in Normal, Ill., August 12, aged 88 years.

Grey, Margaret, M. D., died in Chicago, Aug. 11, from injuries sustained in a fall last February.

Hayton, James, M. D., died at his home in Carbondale, Aug. 7, aged 88 years.

Bernard, Henry C., M. D., a graduate of 1866 from the Medical Department, University of Keokuk, Iowa, and surgeon during the Civil War, died at his home in Charleston, August 10, aged 68 years.

Balsbaugh, Geo. S., M. D., after a long illness, died at his home in Forreston, Ill., Aug. 26, aged 75 years.

Baker, C. M., for many years practitioner and twice mayor of Henry, Ill., died at the Illinois Western Hospital for the Insane, Watertown, of which he had been an inmate for several years, September 3, aged 82 years.

Ough, R. J., M. D., Supreme Physician of the United Order of Foresters, died at his home in Chicago, September 11, aged 65 years.

Green, W. D., died at his home, recently, in Mt. Vernon, Ill.

Colvin, Wm. H., died at his home in Chicago, July 6, from Pneumonia, aged 34 years.

Dr. Levi Westfall Elliott, died Aug. 24, aged 69 years.

Dr. Chas. L. Enslee, died Aug. 23 at his residence, 2029 Kenmore ave., Chicago.

Catlin, E. P., M. D., Rockford, Sept. 28, aged 65. Dr. Catlin was the second oldest practitioner in Winnebago County. He was graduated from Rush in 1875, and formerly practiced in Manteno, Kankakee County.

Catlin, Edward P., M. D., Rush Medical College, Chicago, 1865, assistant surgeon of the 152d Illinois Volunteer Infantry in the Civil War; for many years a member of the Winnebago County Medical Society, which gave a banquet in his honor on Feb. 10, 1903, died from Bright's Disease at his home in Rockford, Ill., Sept. 26, aged 67.

Columbus H. Felts, M. D., Illinois, 1883, died at his home in Clark Center, Ill., in August.

J. E. Waters, M. D., Illinois 1877, died suddenly at his home in Athensville, Ill., July 30, aged 76.

Allen M. Pierce, M. D., Rush Medical College, Chicago, 1861, an Army surgeon during the civil war, died at his home in Wyoming, Ill., June 10.

Andrew D. Finucane, M. D., Bellevue Hospital Medical College, New York City, 1884, Chicago, died at the Illinois Northern Hospital for the Insane, Elgin, Aug. 16.

Samuel S. Strayer, M. D., Chicago Medical College, 1872, died at his home in Naperville, August 18.

Edgar E. Carr, Augusta, Oct. 11, aged 40. He was found dead in bed and it is supposed that he died of heart disease as he had been in ill-health for some time. Dr. Carr was well known in Macon County where he had practiced medicine for a number of years.

The Moline Public Hospital was opened in September 1898. Judge J. M. Gould, who framed the bill passed in 1891, providing for the erection and maintenance of city public hospitals, and the physicians of the city were very active in having it built. As the state law provides it is maintained by a two mill tax, managed by a board of three members chosen by the mayor and all reputable physicians in the city are members of the staff. The present board members have served for several years and are Messrs. G. A. Stephens, Wm. Butterworth and W. C. Macbeth.

The nurses training school is under the supervision of a woman's board called the Woman's Hospital Ass'n. of which Mrs. J. H. McKeever has been president and an active worker since its organization. Miss Marie Watson, a graduate of the Illinois Training School, is head nurse. The term of the nurses training is two years and two months, the extra

two months being devoted to District Nursing work.

The officers of the hospital staff are Pres. Dr. A. H. Arp, Vice-Pres. Dr. E. Sargent, Sec. & Treas. Dr. Martha Anderson.

The staff of lecturers to the nurses are chosen by the hospital board and are as follows:

Anatomy, Dr. A. R. Beal; Physiology, A. D. West; Materia Medica, F. H. Gardner; Medicine, J. M. Wyland; Gynecology, A. H. Arp; Bacteriology, H. D. Bennett; Surgery, L. D. Dunn; Obstetrics, A. M. Beal; Diseases of Children, Martha Anderson; Eye, Ear, Nose and Throat, M. L. Huntington; Dietetics, Mrs. Kate M. Gleason.

Dr. L. D. Dunn entertained the members of the Moline City Hospital staff in their regular meeting at his house Tuesday evening, Sept. 6. The routine business of the staff over, Dr. Dunn read a paper on "Treatment of Compound Fracture of the Skull," and then called upon Dr. T. J. Lamping to report a case upon which he had assisted Dr. Dunn in operation. The paper was an exceedingly interesting one and touched upon first aid service to be rendered in these cases, the instruments necessary for the operation, the technique of the operation itself, the after treatment and the remote effects of the injury. The paper report of the case brought forth considerable discussion by different members present.

After the meeting adjourned Mrs. Dunn invited those present to the dining room where she and Miss Dunn served light refreshments and a very enjoyable half hour was spent.

MOLINE PUBLIC HOSPITAL.

Dr. J. F. Miller, of Palmer, has located in Taylorville. Dr. C. M. Seaton, of Zenobia, has purchased the property of Dr. Miller and located in Palmer.

New Incorporations.

The Secretary of State has incorporated the Herzog Rheumatic Cure company, Chicago; capital $2,500; manufacturing proprietary medicines; incorporators, Ripley N. Baylies, Oscar G. Gaylies and Frank Kellersman.

The Secretary of State has incorporated the Tar Remedy company, Chicago; capital $2,500; manufacturing medical and toilet preparations; incorporators Leonard Simons, Nicholas Bristow and Harry Simmons.

The Secretary of State at Springfield licensed the following corporations:

Pilgrim Remedy company, Chicago; capital, $2,500; manufacturing medicines; incorporators, T. N. Ellings, A. C. Anderson and A. W. Adamick.

Ozintol company, Chicago; capital, $10,000; manufacturing medical preparations; incorporators, Seymour Walton, Charles L. Brown and Walter H. Harrison.

Oak Park Hospital association, Oak Park; maintain a hospital and training school for nurses; William Spooner, Nathaniel M. Jones, Carlos J. Ward.

New Thought Publishing company, Chicago; capital, $2,500; printing and publishing; incorporators, A. S. Doud, John Mullhall, Charles B. Lehan.

Dr. Jacob Frank of 100 State st., Chicago, has returned from Europe and resumed practice.

Dr. Hill, of Mechanicsburg, has taken a five weeks' post graduate course in Chicago.

County and District Societies.

PEORIA CITY MEDICAL SOCIETY.

Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 77.

Officers.

President ..... L. A. McFadden
First Vice President ..... J. C. Roberts
Second Vice President ..... B. M. Stephenson
Treasurer ..... Jeanette Wallace
Secretary ..... S. M. Miller
Censors: E. M. Sutton, one year; A. J. Kanne, two years; F. B. Lucas, three years.

The Peoria City Medical Society convened September 20, in the Observatory building at 8 P. M., Dr. J. C. Roberts in the chair.

Dr. P. H. Keller of Chillicothe was admitted to membership in the Society.

Dr. A. B. Kanavel of Chicago read a paper on **Infections of the hand,, Tendo-Vaginitis, fascial space infection, and cellulitis and lymphangitis,** discussing the relation of the anatomy to the limitation and to the spread of infection, and the bearing of anatomical peculiarities on diagnosis and treatment. A new pathogeny for felon was suggested: viz. Felon is a cellulitis—not a periostitis of the distal phalanx. Radical and intelligent operative treatment of infectious under continuous nitrous oxide anaesthesia was urged. The proper points for opening tendon—sheaths and fascial spaces—was demonstrated by dissections that had been injected with plaster of Paris and by X-Ray plates.

The Peoria City Medical Society met in the Observatory building, October 4, at 8 P. M. Dr. J. C. Roberts presiding. As this was the annual meeting, the reports of the officers for the year were heard and audited.

Dr. Jeanette Wallace read a paper on **preventive gynaecology,** which will appear in this Journal.

PREVENTIVE GYNEOLOGY.

By Dr. Jeanette Currie Wallace, Peoria, Illinois.

Proper supervision of girls at the time of puberty and during the age of development is a great step toward preventive gynecology. The health of the future generation will depend largely on the health of the girl of to-day.

There is a nervous influence in this strenuous age felt by all, from the increased activity, in the social, business and political world, so there is an increasing demand on the growing girl. Although she does not enter into the responsibilities of life, the strain in this nervous atmosphere will leave its impression on her unstable system.

The majority of girls at the age of puberty are in the last year of the grammar school or just entering the high school. Here we often find a suggestion of tuberculosis, chlorosis and anaemia, or one who is nervous, excitable, with an irregular and rapid pulse, constipated and with a poor appetite. In the majority of girls menstrual disturbances begin at this time.

Mary Putnam Jacobi[1] has long claimed, that from observations of the parturient involution is parallel to that of the menstrual period, and from her clinical observations the non-infectious uterine disease does not date from a confinement; but from some aberration of menstruation. Much harm done during this period can never be remedied.

A careless management of this function at any period of life, during its existence, is apt to be followed by consequences that may be serious; but a neglect of it during the epoch of development, that is, from the age of fourteen to twenty, not only produces great evil at the time of neglect, but leaves a large legacy to the future[2].

Improper development is an important factor in uterine displacements, and is followed by a long chain of disturbances, as dysmenorrhea, amenorrhea, sterility and many others. The causes are as numerous as the diseases they produce; as errors in diet, the want of fresh air, improper clothing, want of exercise, overwork in school, and strain under the modern mode of living.

Dr. Jane Kelly Sabine[3], of Boston, after examining 2,000 girls in New England, reports as follows: 75% were found with irregularities dating from puberty; 60% had to give up work from one-half to two days each month, and 90% had leucorrhoea.

Menstrual disturbances are not confined to one class of girls. They are found in all classes; in the poor and ignorant, the middle class, and are even more prevalent in the more intelligent and well-to-do.

A New York firm advertised for a large number of able-bodied women between the age of sixteen and twenty.

There were two hundred and fifty applicants. Among this number fifteen were thought worth considering; ten were selected[4].

Who is to blame if the girl has lost her health by the time she reaches womanhood?

Much blame has been attached to the present school system. The course is too crowded, especially in the high school; too long study hours, and not enough out-door exercise.

In California the legislature has prohibited home study. A test was made and found that the no-home study classes did superior work to the classes in which home-study was kept up[5].

It has been observed by those who have made investigations that chronic disorders are more frequent among children whose instructions extend over the whole day, than those who go only in the morning. The strain falls on the weak girl, from day after day of cramming, memorizing, to complete the required

work, and perhaps with the ambition to stand at the head of the class, or to make two grades in one. At the end of the year her strength has been taxed to its utmost, and we have an unequal development. The brain is developed at the expense of the body. The blood which should go to the uterus is utilized by the brain and an undeveloped uterus is the result.

It is said that when Lady Amberly visited the public schools in Boston she said: "I never before saw so many pretty girls together," and then added "they all looked sick."

Wylie, in the New York World says: "that the American horse, on an average, receives better treatment than the young woman of America from the time of early girlhood, until the age of development has passed.

The young horse is never forced during the period of development; while the American parents, especially of the middle classes, with great ambition for their children, and the desire that they should develop intellectually beyond their own standard, allow their heads to be crammed with knowledge so rapidly that the brain cannot assimilate it, and the result is, that all the strength of development is devoted to the brain and the physique finds expansion as best it can."

Music is so often added to school work, regardless of any talent or taste for it.

The present school system may be criticised, but I believe the Board of Education is usually composed of a body of conscientious men and women, who spend much time in planning the school work.

Most of the buildings are equipped with the best improvements, much attention has been given to the lighting, ventilation, heating, seating, temperature and gymnasiums are added for the physical training.

In many schools domestic science and manual training are added, which will give a broader and more practical education.

Social demands are more often a disturbing factor in the physical break-down of young women than school work.

A young miss of seventeen told me last winter, that during the holiday season, her social duties required her to attend five receptions in one afternoon, and a dance on the same evening. This was not only one day's program, but almost every day of the holiday season. It is needless to say that this young lady was all worn out when she returned to school, after the two weeks of dissipation and is a sufferer of dysmenorrhea.

Too much cannot be said against error in diet formed by school children. Some one has said: "We live in a zone of perpetual pie and doughnut." I should like to add—fudges and pickles.

A few years ago, there was a woman in this city who kept a small grocery store near one of the school buildings. She said the greater part of her income came from the sale of pickles to the school children during the recess.

One of the fads existing in the present school girl is the insufficient clothing worn in the winter.

Last winter in a class of girls in one of our schools, one of the young ladies discovered that she was the only one in the class who wore a long-sleeve undervest.

She came home very indignant at her mother for allowing her to be so over-burdened with as much unnecessary clothing as a long-sleeve vest. These young misses are very persistent in this foolish fad, and I have heard them claim to be perfectly comfortable on the coldest days, when at the same time they were so cold and blue they could hardly talk.

How and who is going to adjust the claims which rightly belong to the growing girl?

Dr. Engelman[6] says: "The first step toward betterment is knowledge, a knowledge of woman's functional life, its conditions and requirements and understanding of its nature by physician, educator, the mother and the girl herself."

These patients are very unsatisfactory to treat. They come to us; we give them a prescription and perhaps we never see them again.

They need advice more than medicine. They need to be told the importance of care during this time.

Impress parents that the frail girl should be looked after until development has passed, but she need not be reminded every day of her frail condition.

She should be kept quiet the first two or three days of menstruation, until regular, healthy menstruation is established, and if necessary, keep her out of school a year or two. Education can come later when she is stronger and more able to grasp it, while a physician's efforts to overcome harm done during this period are fruitless.

If kept at home she need not be idle. Give her some systematic work with plenty of fresh air and exercise.

"Educate as highly as possible—the higher the better—providing no bodily injury is entailed. But to educate in such a manner, or to such an extent, as to produce physical degeneracy is to defeat the chief end for which the toil and cost and anxiety are submitted to."

How can the school question be adjusted? No set rule can be laid down for all pupils, nor can fifty or sixty pupils of different degrees of health be specialized.

It is not uncommon to find a weak body with a very bright mind, and it is a temptation to urge such a pupil for promotion.

The teacher has too much to do. She should have a fewer number of pupils so she could have time to notice the requirements and instability of the girl at this time.

How can a teacher, with fifty or sixty, give any attention to the physical conditions of her pupils, with all the other work which is demanded of her.

Dr. Christopher tested several thousand children in the Chicago schools with the erograph. He found the endurance of boys and girls about the same until about nine years of

age, when the girls' endurance diminished somewhat in comparison to the boys'.

At fourteen the boys' endurance increased until about nineteen or twenty, while the girls' seemed to cease.

He also found a definite daily curve of endurance diminishing toward noon, and rising after the noon hour, and diminishing again toward night.

The schools in which cooking, home-making and manual training have been added, there has already been an improvement in the health of the pupils.

What is education? Is it not a knowledge to make the most out of life?

One of our educators has said: "How to live—that is the essential question for us. Not to live in the mere material sense only, but in the widest sense. The right ruling of conduct in all directions, under all circumstances; in what way to treat the body; in what way to treat the mind; in what way to manage our affairs; in what way to bring up a family; in what way to behave as a citizen; in what way to utilize all the sources of happiness which nature supplies—how to utilize all our faculties to the greatest advantage of ourselves and others—how to live completely? And this being the great thing needful for us to learn, is by consequence the great thing which education has to teach."

Physiology and hygiene should take a more prominent place in our schools; they have not had their share of attention. The university settlements and the associated charities are doing much in the poorer localities of our cities in teaching the poor classes the laws of health and sanitation, but in the public schools these branches have been somewhat neglected.

Often an entrance examination in the common branches, and sometimes in the languages is required to obtain positions, and sometimes a physical examination is required, but seldom are there any requirements in the knowledge of physiology and hygiene to engage in business or to obtain any position.

It seems that it has not been thought necessary that this strong physique sought for, should know how to keep strong and well, but they expect a strong body and a bright mind to do the work. Let the youths of our schools be instructed in the fundamental principles of physiology and hygiene and the sources of disease, and in a few years the municipal government of our cities would be an easy task; the water supply, sewerage, plumbing and drainage would be the best.

All cities would be provided with well equipped municipal city laboratories, where an early diagnosis of infectious diseases could be made, and the board of health would find it easier to deal with contagious diseases, and getting the people to comply with the ordinary rules of sanitation, and tuberculosis would be greatly lessened.

The board of health should be allowed to appoint medical inspectors for schools, one inspector being appointed for a certain number of schools. This has been done with excellent results in many cities, especially in Chicago, Boston and Philadelphia. Boston was the first city to make these appointments. She appointed medical inspectors in 1894.

The inspectors make an examination of each child, and if any child needs attention he is referred to the family physician.

How often a child with tuberculosis is allowed to remain in school, until, through weakness, he is compelled to stay at home. Sometimes a teacher with the same disease is allowed to teach exposing from fifty to sixty pupils each day.

In some cities teachers are required to pass a physical examination before they can teach.

Aside from the teaching of physiology and hygiene, let the medical inspectors give the boys and girls separate lectures. It is a mistaken idea that a girl should know nothing of her pelvic organs. She should at least know enough as would be necessary for the self-preservation of health.

How many women and girls come to us with pelvic lesions, giving a history of dysmenorrhea that dates back to puberty, through ignorance of not having the proper care. If a girl gets her instruction in the right way, nothing but good will follow, and it will free her mind from a great amount of worry.

Often the most devoted mother will enlighten and advise her daughter on almost every subject, but will leave her in ignorance in regard to her womanhood, and this the girl must find out in the best way she can.

I believe that such negligence is criminal.

France is greatly agitated over her decrease in population, and it seems that she is doing more than any other country for the improvement in the health of her young.

America too is crying race suicide, and some people are trying to lay the blame on the higher education of women. If a woman has good health, after development, higher education will not hurt her. It is the stage of development that leaves its imprint on her after life.

America may well follow France's example in looking after her young, for certainly each succeeding generation is getting weaker, and with inherited physical sins and our own, under this long continued nervous pressure in which we live, it does look like there might be an extinction of the race.

Dr. Engelman[7], of Boston, says: "The rate of child-birth has been decreasing in college families, but it has been decreasing throughout the civilized world, slowly in the old world, but with astonishing rapidity in the new, that is, among the native American born of our population, until it has reached a minimum; the number of children to the native-born American family of all classes (and in this lies the danger) being less than it is, in any other country, France not even excepted, which has long been known to be at the point of stagnation. The American population is not holding

its own; it is not reproducing itself, and the highly educated do not stand alone in this."

He further says: "Family shrinkage seems clearly referable to the strenuous nerve-racking life of the day, to the struggle, not for existence, but for luxurious existence, to the ever increasing desire for the luxuries of life, and for the morbid craving for social dissipation and advancement."

Before many years we may long for the old-fashioned girl of Louise Alcott, and a more simple way of living.

Medical science has now reached a higher state of perfection than it has ever before, with its rapid advancement in internal medicine and its improved technic in modern surgery. The world has never been so richly endowed with libraries and finely equipped laboratories, and there never has been so much research work as at the present time.

All these advancements we are proud of, but in the face of all this wonderful progress, there never was a time when so many young women are consulting gynecologists and are having to submit to operations as at the present.

If this is the age of prevention, ought not we as physicians, give more attention to the growing girl, during the period of development, and try to prevent some of the diseases, which we are now trying so hard to alleviate by the improved methods of modern surgery?

Some one has looked far ahead, after reaction has taken place, to a bright prospect: "In the distant generations, the homes shall be full of noble faces, because the laws of living shall be known to be obeyed, and sickness, if self-acquired, shall be a crime."

Then the school-girl needs an education that will give her a foundation of health on which to stand, so she may be capable to meet all the requirements that will be demanded of her.

Herbert Spenser says: "Instead of respecting the body and ignoring the mind, we now respect the mind and ignore the body. Both these attitudes are wrong. We do not yet sufficiently realize the truth that, as in this life of ours, the physical underlies the mental; the mental must not be developed at the expense of the physical.' The ancient and modern conception must be combined. The fact is, that breaches of the laws of health are physical sins. When this is generally seen, then and not till then, will the physical training of the young receive all the attention it deserves."

Literature.

1. Jacobi: Menstrual Subinvolution. Amer. Jour. of Obstet. Sep. 1885.
2. Clark: Sex in Education.
3. Sabine: Paper read before Society for Medical Improvement, Sec. 16, 1901.
4. Kesley: Jour. A. M. A. June 9, 1904.
5. Jour. Amer. Medicine, April 20, 1901.
6. Engelman: The American Girl of to-day. Amer. Jour. of Obstet. Dec. 1900.
7. Engelman: Education not cause of Race Decline. Pop. Science Monthly, June, 1903.

VERMILION COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Monday of each month in the city hall, Danville, at 8:30 p. m. Membership 71.

Officers.

President ..... Jos. Fairhall, Danville
Vice President ..... F. N. Cloyd, Westville
Sec'y and Treas. .....C. E. Wilkinson, Danville
Board of Censors: ...H. F. Becker, T. E. Walton, W. A. Cochran.
Committee on Medical Practice Act: E. E. Clark, S. L. Landauer, S. C. Glidden.

On Program: H. F. Becker, H. W. Morehouse.

MEMBERS.

Babcock, H. S., Danville; Barton, F. W., Danville; Becker, H. F., Danville; Black, S. M., Georgetown; Brown, W. J., Danville; Brown, R. A., Humrick; Butz, J. E. P., Potomac; Chaffee, J. A., Danville; Clark, E. E., Danville; Clinch, J. H. M., Danville; Cloyd, F. N., Westville; Cloyd, R. A., Catlin; Cochran, W. A., Danville; Coolley, E. B., Danville; Cossairt, W. S., Potomac; Current, Effie, Danville; Fairhall, Joseph, Danville; Fox, A. L., Danville; Finley, J. L., Collison; Fithian, P. H., Fithian; Fisher, J. G., Catlin; French, G. M., Danville; French T. P., Danville; Gillette, R. W., Danville; Gleeson, Benjamin, Danville; Glidden, S. C., Danville; Guy, J. M., Danville; Hardman, E. L., Allerton; Hughes, G. W., Armstrong; Huston, I. E., Danville; Ingles, J. A., Hoopeston; Johnson, A. G., Sidell; Johnston, E. A., Danville; Jones, Solomon, Danville; Jones, S. W., Danville; Jones, Leroy, Hoopeston; Kingsley, V. C. T., Danville; Landauer, S. L., Danville; Leavitt, Clark, Danville; Leitzbach, A. J., Fairmount; Lottmann, W. A., Oakwood; Mason, F. M., Rossville; Michael, O. W., Muncie; Miller, A. M., Danville; Moore, Samuel, Danville; Morehouse, H. W., Danville; Morton, J. B., Ridge Farm; O'Haver, J. W., Danville; Paul, W. H., Danville; Poland, B. I., Danville; Ray, D. V., Jamesburg; Rothgeb, H. D., East Lynn; Sims, S. N., Danville; Smith, E. M., Georgetown; Taylor, Buford, Westville; Walton, T. E., Danville; Wilkinson, C. E., Danville; Williamson, G. L., Danville; Saunders, F. E., Perrysville, Indiana; Regan, Theo., State Line, Indiana; Wilkins, J. M., Fairmount; Worthington, R. R., Indianola.

The society held its regular monthly meeting in the Council Chamber, Monday evening, September 12, 1904, President Joseph Fairhall, in the chair.

The minutes of the June meeting were read and adopted.

The Board of Censors reported favorably on the name of Dr. J. R. Colliers for membership and he was elected to membership.

The committee on program made a report of their work which was accepted by the society and the committee discharged.

The following names were proposed for membership, Dr. James Darrah, of Cayuga, Ind., Dr. Saunders of Georgetown, Ill., and Dr. Robert McCaughy of Hoopeston, Ill., and referred to the Board of Censors.

The president appointed a committee consisting of H. F. Becker and C. E. Wilkinson to prepare new Constitution and by-laws and report same at the October meeting.

The paper on **Scarlet Fever,** by J. G. Fisher, M. D., was very ably presented and a good discussion followed. Dr. T. E. Walton in the discussion stated that he had given salicylic acid as a preventative of **Scarlet Fever** with satisfactory results.

Dr. P. H. Fithian who was on the program for a paper on **Typhoid Fever** was not present so Dr. Leavitt who was to open the discussion presented the subject in a very able manner and an interesting discussion followed.

Members present: J. G. Fisher, H. F. Becker, A. J. Leitzbach, C. Leavitt, E. M. Smith, Joseph Fairhall, F. W. Barton, I. E. Huston, A. M. Miller, J. M. Wilkins, T. E. Walton, S. M. Black, and C. E. Wilkinson.

The society adjourned to meet the second Monday evening in October.

The program for the remainder of the year follows:

November 14, 1904.

Chronic Pneumonia, S. L. Landauer.
Discussion opened by T. E. Walton, followed by J. A. Ingles and E. L. Hardman.
Broncho Pneumonia, A. Merrill Miller.
Discussion opened by R. A. Cloyd, followed by J. W. O'Haver and G. M. French.
Report of cases.
Election of officers.

December 12, 1904.

Railroad Injuries, Peculiarities and Treatment, F. W. Barton.
Discussion opened by H. W. Morehouse, followed by R. W. Gillette.
Mine Injuries, Interesting Points in, F. N. Cloyd.
Discussion opened by Buford Taylor, followed by J. M. Guy.
Report of cases.

January 9, 1905.

Preventive Medicine, F. M. Mason.
Discussion opened by H. F. Becker, followed by J. M. Wilkins.
Medical Legislation, Dr. Joseph Fairhall.
Discussion opened by A. L. Fox, followed by R. R. Worthington.
Report of cases.

February 13, 1905.

The Application and Results of Electricity in Malignant Disease, A. L. Fox.
Discussion opened by S. C. Glidden, followed by S. W. Jones and V. C. T. Kingsley.
Relation of Iritis to Systemic Diseases and its Diagnosis and Treatment, Benj. Gleeson.
Discussion opened by B. I. Poland, followed by I. E. Huston.
Report of cases.

March 13, 1905.

The Relation of Heart and Kidneys in Disease, C. E. Wilkinson.
Discussion opened by F. M. Mason, followed by J. L. Finley.
The Treatment of Nephritis, Leroy Jones.
Discussion opened by R. A. Brown, followed by J. H. M. Clinch and G. W. Hughes.
Report of cases.

April 10, 1905.

The Indications and Contra-Indications for Operation in Mastoid Disease, E. E. Clark.
Discussion opened by Benj. Gleeson, followed by H. D. Rotgeb.
Appendicitis, W. A. Cochran.
Discussion opened by G. L. Williamson, followed by C. E. Wilkinson.
Report of cases.

May 8, 1905.

Syphilis, T. E. Walton.
Discussion opened by E. M. Smith, followed by T. P. French.
Gonorrhoea, W. J. Brown.
Discussion opened by H. S. Babcock, followed by Samuel Moore.
Report of cases.

June 12, 1905.

Summer Diarrhoeas in Children, E. B. Cooley.
Cerebro-Spinal Meningitis, S. M. Black.
Discussion opened by W. A. Lottmann, followed by S. N. Sims and D. V. Ray.
Discussion opened by W. H. Paul, followed by J. B. Morton and A. G. Johnson.
Report of cases.

The regular October monthly meeting of the V. C. M. A. was called to order by the president at 8:30 P. M.

The minutes of the September meeting was read by Dr. H. F. Becker, Secretary pro tem, and approved as read.

The chairman of the board of censors reported favorably on the names of Dr. James Darrah, of Cayuga, Ind., Dr. Saunders of Georgetown, Ill., and Dr. Robert McCaughey of Hoopeston, Ill., and upon a motion they were duly elected members of the association.

The committee on Constitution and By-Laws made a report—and on motion by Dr. Guy the report was laid over for discussion at the next regular meeting.

The names of J. B. Hundley and M. Sahud of Danville and L. W. Reid of Fairmount were proposed for membership and referred to the board of censors.

A communication from the secretary of the State Board of Health, J. A. Egan, concerning the laboratory established for the purpose of bacteriological research was read and placed on file.

The paper on the management of labor by Dr. J. M. Guy met the expectation of the Society by its very able presentation. On account of the absence of the members on the program to open the discussion, the President appointed Dr. Coolley to open the discussion and was followed by Dr. F. N. Cloyd and Dr. Leitzbach—quite an interest was manifested and the discussion became general.

Members present: Drs. Joseph Fairhall, H. F. Becker, F. N. Cloyd, R. A. Cloyd, E. B. Cooley, A. J. Leitzbach, H. S. Babcock, J. M. Guy, F. W. Barton, J. G. Fisher, Solomon Jones, J. M. Wilkins, D. V. Ray, and V. C. T. Kingsley.

Meeting adjourned to meet the second Monday evening in November.

SANGAMON COUNTY MEDICAL SOCIETY.

Regular meetings are held at the Lincoln Memorial Library in Springfield the second Monday of each month at 8 p. m. Membership 75.

Officers.

President ..... B. B. Griffith, Springfield
Vice President ..... S. E. Munson, Springfield
Secretary-Treasurer ..... C. P. Colby, Springfield
Directors, W. O. Langdon, R. D. Berry, C. R. Spicer

The Society held its regular monthly meeting Monday evening, October 10th, in the new Library building. Meeting called to order at 8:30 P. M. by President Griffith. There were twenty members and three visitors present. Minutes of last meeting read and approved. Bills of $2.75 read and ordered paid. Drs. T. L. Perkins, Gordon W. Rice, Maurice Altman and O. H. Deichmann were elected to membership. The applications for membership of Dr. Metcalf of Springfield and Dr. McIntosh of Pleasant Plains were read and referred to the board of directors. Dr. James L. Lowrie of Lincoln was the essayist of the evening, his subject being **Typhoid Fever.** In the discussion which followed special stress was given to the modes of treatment. Dr. Kreider presented gall stone specimens from twenty cases. Dr. Nelson read a letter from Dr. Egan giving the requirements of the post office department when sending specimens through the mail.

A vote of thanks was extended to Dr. Lowrie for his very interesting paper.

Motion to adjourn was carried.

The Society decided to give a banquet on the occasion of the annual meeting November 14. President W. E. Quine of Chicago, of the State Medical Society will be present and deliver an address on the morals of the medical profession.

FULTON COUNTY MEDICAL SOCIETY.

Regular meetings are held the first Tuesday of of May, July, October and December. Membership 42.

Officers.

President, J. W. Conelly.....Farmington
First Vice-President, S. A. Oren.....Lewistown
Second Vice-Pres't, G. R. Blackstone..Table Grove
Secretary-Treasurer, D. S. Ray.....Cuba
Necrologist, F. R. Miller.....Canton
Board of Censors, Maud T. Rogers.....Cuba

The seventh annual meeting of the Fulton County Medical Society was held in the parlors of the Canton Public Hospital, Oct. 4, 1904. Meeting was called to order by Pres. Scholes at 10:40 A. M. Sec. Ray was absent and Dr. Roberts was appointed Sec. pro tem.

Dr. Blackstone presented a paper on **Infant feeding.**

Discussion by Drs. Stoops, Blackburn and Chapin.

After banquet a motion was made that we proceed to business meeting. Carried. Minutes of last annual meeting was read and approved. The above officers were elected.

The retiring President Dr. Scholes was selected delegate to the State meeting.

Report of Membership Committee recommending the applications of Drs. McLarin of Ipava, V. C. Murphy of Cuba and Robt. Ewan of Smithfield was accepted and applicants duly elected to membership.

Secretary's report showing a balance of $38.75 was read and accepted.

Communication from State Board of Health was read.

By-laws was amended making Canton the permanent meeting place of the society.

Bill of E. A. Powers for $1.75 for printing was allowed and ordered paid. Bill of C. A. Philips for $3.00 was allowed and ordered paid.

Moved that a vote of thanks be extended to the ladies and others who made the banquet a success. Carried.

Members present: Roberts, Scholes, Blackburn, Stoops, Regan, Chapin, Hayes, McLarin, Blackstone, Adams, Harrison, Murphy, Ewan, Bowman, Coleman, Rogers and Oren.

EFFINGHAM COUNTY MEDICAL SOCIETY.

Regular meetings held on the 2d Tuesday of each month in Commercial Club rooms at Effingham. Membership —

Officers.

President, Dr. J. B. Walker.....Effingham
1st Vice-President, Dr. J. N. Matthews.....Mason
2d Vice-President, Dr. S. Clark.....Effingham
Secretary, Dr. W. L. Goodell.....Effingham
Treasurer, Dr. F. W. Goodell.....Effingham

The Society met in regular session at 1 P. M. Tuesday, October 11th, in Commercial Club rooms at Effingham, President Walker in the chair.

Members present: J. B. Walker, J. H. Walker, Schifferstein and Groves, Effingham. Tope, Montrose; Phifer, Shumway; F. W. Goodell, Effingham, and Buckmaster, Altamont. Dr. Phifer read a very instructive paper on **cerebro-spinal meningitis.** The essayist related case I. that of a young lady who could not see, hear or speak when he visited her. The case was an extremely severe one. He injected two doses of anti-diphtheritic and anti-streptococcic serum (mixed) and in 24 hours the patient was greatly improved and rapidly made a complete recovery mentally and bodily. In Case II. related by the essayist after the patient—a boy—had lain unconscious for a considerable time he made a spinal puncture and withdrew considerable fluid (though he did not know exactly the amount withdrawn). He allowed the fluid to escape by intra-spinal pressure. In 12 hours the boy rallied and made a complete recovery.

As treatment, the essayist, advised, opium by stomach as needed, sodium salicylate, T. Mur. Iron, etc. When the intra-spinal pressure becomes too great withdraw some of the fluid —repeating the proceedure if need be.

He would not hesitate to use the mixed anti-toxins above mentioned in future cases. This paper was a masterly article and was freely discussed. Dr. Groves advised as treatment ergot, calibar bean, gelsemium, opium, calomel and counter irritants. He treated over 70 cases in '72-'73—mostly recoveries, but the majority of these, especially in young patients being imperfect.

Dr. J. B. Walker in discussing this subject, by way of diversion, said that at one time when visiting a patient having puerperal sepsis, in an extremely severe form, oft repeated chills, etc., he had at night injected 4000 units of

diphtheria anti-toxin. Next morning the patient was so much improved that he injected 6000 units more after which she rapidly made an uninterrupted recovery.

The next on the program was the presentation of a patient—boy—13 years old—afflicted with diphtheritic multiple neuritis by Dr. Tope.

On August 23d 2000 units of diphtheria antitoxin was given and the boy recovered nicely, and in a week was up and going. Later he attended school for a week or two. His recovery still apparently perfect. About 3 weeks after getting up, or about 4 weeks from the onset of the disease he worked very hard for a whole day scooping shelled corn. The next day he felt stiff and bad and on the 2d day afterward he was paralyzed. He now walks with great difficulty, his gait being that of a tabetic. His speech is very poor. He has better use of his arms. Has had diplopia and accommodation is interfered with. At the onset of the neuritis his heart was rapid but now slowed down and is now doing nearly normal work. Patella reflex absent showing it to be plainly a case of **post diphtheritic** paralysis.

Dr. Tope's treatment has been good nourishment, quietude, strychnine, phosphoric acid and iron with Pot. iodide recently added.

In the discussion of the case, Dr. Schifferstein advised, strych, hypophos, quinine and glycerophosphates of lime and soda.

Dr. Groves suggested Cod Liver Oil and proto-nuclein.

Dr. Phifer the following:

℞ Potass. iodide	grs.	LXXX
Iodine	gr.	XL
F. E. Nuc. Vom.		
F. E. Bellad	aa	℥ II
agua qsad		℥ II

(Note.) Add the iodine to the watery solution of the pot. iod. then add other ingredients. Sig. 10 to 15 m tid; He also advised galvanism and massage.

Dr. Buckmaster suggested that, barring myocarditis or an involvement of the cardiac nerves or those concerned in the act of respiration—these cases of post-diphtheritic paralysis tend to recover in a few weeks under good nourishment proper hygienic surroundings and with fresh air, intending to keep the patient's exertion below the point of danger to the heart.

Following this, the President, Dr. Walker gave a talk on medical organization, reviewing its difficulties, its benefits, etc., and asked the hearty support of all of our members toward continuing our full membership. He suggested that more effort be put forth to make this a good clinical society.

This subject was fully discussed, Dr. Phifer suggesting that we obtain bodies during the winter and conduct dissecting and operative courses. Dr. Buckmaster suggested that, to celebrate our first anniversery and to rally all of our members and some in the county that are not members—we have a banquet at our annual meeting in December, inviting good musical and oratorical talent and that the day be given to merry making, creating a better fellowship between the physicians of the county and to enlarging our membership for the ensuing year. A motion was made to this effect which was seconded and carried.

COLES COUNTY MEDICAL SOCIETY.

Regular meetings are held ————

Officers.

President, F. E. Bell.....Mattoon
Vice-President, Joseph Perkins.....Charleston
Secretary-Treasurer, O. W. Ferguson.....Mattoon
Censor, C. B. Fry.....Mattoon

BOND COUNTY MEDICAL SOCIETY.

Meetings are held semi-annually on the second Tuesday of May and October.
Membership 19.

Officers.

President .....
Secretary, W. T. Easley.....Greenville

The Bond County Medical Society met in its fall session on October 13th, with a good attendance of its membership. Drs. J. C. Wilson of Greenville and Dr. J. D. Chittum of Sorento, was reinstated to membership. A communication from the State Board of Health in regard to laboratory for bacteriologic research of Springfield was read and commented upon by all present as being a blessing to all. Also a resolution was adopted unanimously that each member of the county society should distribute copies of the circular published by the State Board of Health: "the Cause and Prevention of Consumption." To their patients and others. The subject of Consumption was discussed by all present. The first subject on the program was **Benefits of Organization.** Dr. Vaugh being absent, it was taken up by all, each one expressing his ideas.

The next subject was **what benefits are to be derived from the county and State Societies.** Dr. J. H. Gordon being absent the subject was not discussed, after which the following subject was taken up. **Shall we council with physicians who are not members of the county society?** This subject brought out a very free discussion pro and con. There being a few physicians living in the county who are not members of the Society this was presented for consideration, and various ways were discussed as to how to bring them into the Society. The Society adjourned to meet in Sorento, Ill., May, 1905. After discussion of the place of meeting the Society decided that it would be to the interest of the profession to meet in the above place.

ADAMS COUNTY MEDICAL SOCIETY.

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President ..... L. H. A. Nickerson, Quincy
First Vice Pres ..... John A. Koch, Quincy
Second Vice Pres ..... J. M. Grimes, Camp Point
Secretary ..... Geo. E. Rosenthal, Quincy
Treasurer ..... R. J. Christie, Jr., Quincy
Censors: C. D. Center, Jos. Robbins, S. B. Ashton, Quincy.
Delegate State Society..E. B. Montgomery, Quincy

The regular monthly meeting of the Adams County Medical Society was held in Quincy at the Chamber of Commerce, October 10th, President Nickerson being in the chair.

Those present were: Drs. Ashton, Brenner,

Center, Christie, Hart, Hatch, Knox, Koch, Montgomery, Meyer, Nichols, F. E. Nickerson, Pfeiffer, Robbins, Rice, Rosenthal, Vasen, Williams, W. W. and Wells.

The Society moved to extend an invitation to the Western Illinois District Medical Society to meet in Quincy, October 28, 1904, for the autumn meeting of that body. A committee on entertainment was appointed, consisting of Drs. Hatch, Vasen and Montgomery.

Dr. F. E. Nichols presented an admirable paper on **Ptomaine Poisoning** with a report of cases, to be reported in next months Journal.

ROCK ISLAND COUNTY MEDICAL SOCIETY

Regular meetings are held bimonthly at Rock Island on the second Tuesday. Membership 56.

Officers.

President.....L. D. Dunn, Moline
1st Vice-President.....G. A. Wiggins, Milan
2d Vice-President.....W. L. Ludewig, Rock Island
Secretary.....T. J. Lamping, Moline
Treasurer.....C. W. Whiteside, Moline
Official Reporter.....F. H. First, Rock Island

The society met in regular session on Tuesday, October 11, 1904, at Manufacturers' Hotel, Moline, twenty members present.

The subject of **Appendicitis** was presented by Dr. E. M. Sala of Rock Island and discussed by several members.

Tuberculosis in Children was the subject of a very able paper by Dr. Gardner of Moline.

The committee of arrangements for the meeting of the State Society report progress along all lines.

The names of three new physicians were presented for membership in the society.

CLARK COUNTY MEDICAL SOCIETY.

Regular meetings are held at Marshall, quarterly. Membership 12.

Officers.

President ..... Jos. Hall, Westfield
Vice President ..... R. H. Bradley, Marshall
Secretary ..... L. J. Weir, Marshall

Clark County Medical Society met in the court house at 2 P. M. Thursday.

Members present were Bradley, Ryerson, John Weir, W. W. Bruce, Smith, P. P. Haslit, L. J. Weir, H. W. Haslit and Rowland.

The minutes of the previous meeting were read and approved. A communication from the State Board of Health was read informing us of their establishing a laboratory at Springfield for the free examination of specimens of sputum for tubercle bacilli, blood for reaction of typhoid fever and nucleus for diphtheria bacilli.

Dr. Ryerson's paper on **insanity.** He presented the subject in a systematic manner and was well received. Subject was discussed by all present. Dr. Smith dwelt upon arterio sclerosis, especially that resulting from alcohol and syphilis, as one of the causes of insanity. Dr. Haslit considered firmness though kindness essential in managing cases of hysteria and other forms of insanity in their beginning. He holds many individuals now suffering under the law are insane and that medical jurisprudence is sadly deficient on this point. Dr John Weir emphasized the importance, in the treatment of an insane person, of improving the environment, or, better still, getting him away from too sympathetic friends and other detrimental surroundings, treating associated diseases, etc.

Dr. Rowland cited the fact that the time of probable cure is in the first three months, described two interesting cases seen and known for years, demonstrating the usual insanity and the hysterical insanity. The latter was cured by Christ she said "and the cure would last as long as she was good—good to the poor, etc." L. J. Weir reviewed the history of insanity, stating that King Nebuchadnezzar was insane 1000 B. C., instead of "being possessed of a devil," when he ran in the pasture with swine seven years; that the 50,000 persons executed as witches in the 14th to 17th centuries were many of them insane; that all superstition is not a thing of the past in Clark county, and this county is fully abreast with other counties. Symptoms and treatment were discussed also. Dr. Bradley cited some cases following syphilis and typhoid fever. Dr. Ryerson, in closing the discussion, reviewed the whole subject.

It was the concensus of opinion that medical jurisprudence would give more justice if a state commission of experts in mental diseases were selected to examine every one who pleads insanity and give in their evidence before the jury.

It was the unanimous decision of this society that the present plan of management of our state asylums for the unfortunate insane by political pirates instead of by experts in mental diseases, appointments being made according to the political pull an applicant has instead of on the merit plan, is a serious detriment to the scientific and even the humanitariary treatment of these wards of the state.

Drs. H. W. Haslit, G. T. Rowland and John Weir were appointed as a committee to meet with the County Board of Supervisors and offer suggestions regarding the insane in our county poor house, the majority of which inmates have delusions etc., and are insane. It was considered that all dependents are either insane or sick and should be treated according, though it is proper to say that the present management is as good as it ever can be without some changes in the general plans, which plans it is the duty of this committee to study into and report to the Board of Supervisors.

"The Prevention and Cure of Tuberculosis" was selected as the subject for next meeting. The committee on program and scientific work was instructed to prepare a letter or circular expressing the voice of the County Medical Society to the people of our county stating that consumption can be cured and can be prevented; and by preventing well persons from getting the disease from those who have it, the dread disease can be, and will be in time made a thing of the past, just as cholera and yellow fever have now almost completely been eradicated from the face of the earth by scientific, intelligent prevention. Stating also that the physicians of our society, with the help and encouragement of the people, are making every effort henceforth and forever to change the rate of deaths from consumption (eleven per cent of whole number of deaths) in Clark county—the highest per cent of any county in the state,

as shown by State Board of Health statistics for 1902 and 1903, and other facts that the committee or the society at its next meeting might suggest and decide upon. A number of copies to be printed and each with a copy of the circular issued by the State Board of Health on "the cause and prevention of Consumption" to be handed to, or mailed to every family in the county that will probably take an interest in the matter.

Dr. Bruce came into the meeting a few moments and expressed to the society his regrets and the regrets of his brother physicians at Casey that they could not be with us in persons but assured us that their sympathy and best wishes were with us.

Society adjourned.

DECATUR MEDICAL SOCIETY.

Regular meetings are held in the Decatur Club Rooms the fourth Tuesday of each month Membership 62.

Officers.

President ..... Lynn M. Barnes
Vice President ..... Clara Garber
Secretary-Treasurer ..... W. C. Bowers
Board of Censors: E. A. Morgan, F. M. Anderson, J. Stebbins King.
Programe Committee: W. C. Bowers, Chairman; E. J. Brown, W. C. Wood, A. Wilhelmy, L. M. Barnes.
Delegates to the State Society: Cass Chenoweth, W. C. Bowers, E. J. Brown.

The Decatur Medical Society held its regular monthly meeting in the Decatur Club Rooms, at 8 p. m. President Lynn Barnes in the chair.

Dr. J. C. Fisher read a short but excellent paper on **Eye Strain.** This paper was written more especially for the general practitioner. It was free from technical terms and much to the point.

Drs. Saunders, Bumstead and McClelland opened the discussion.

The second paper was written by one of our able country practitioners, Dr. A. T. Botts, of Warrensburg on **Intestinal Antisepsis and Antiseptics.** The paper was well prepared and elicited considerable discussion which was opened by Drs. J. Stebbins King and Will Chenoweth.

Dr. James L. Bevans of the United States Army who is visiting his parents here gave one of the most entertaining and instructive talks the society has heard on the army medical service. He told of the arrangements of a Post Hospital, of the Medical arrangements at Manasses during the late maneuvers there and of a relief expedition in Alaska which he had charge of, traveling 1,000 miles total with dogs, mules, reindeer and sledges to almost unexplored parts to relieve some natives who were dying of disease and starvation.

The government furnished the expedition with sheepskin outer coats the hood having a hair fringe about the face to protect from freezing.

The goggles to keep off snow blindness were made of woven wire, isinglass front and rubber under the edge of the wire to keep the iron from freezing the face.

The natives wear a piece of wood before the eyes with a slit in to see out at but can only see straight ahead in the direction the face is looking.

Pneumonia following measles and other lung troubles are killing off the natives. Mostly from lack of protection and poor food. The American soldiers suffered but little from pneumonia or other sickness because of good food and plenty of supplies.

Drs. R. L. Walston and R. J. Morris were admitted to membership.

Dr. Bevans was given a vote of thanks for his good talk and made an honorary member of the society.

A "smoker" added somewhat to the enjoyable meeting.

The Decatur Medical Society met in the Decatur Club rooms Tuesday evening, October 25, 1904. Dr. Lynn Barnes the President, in the Chair.

Dr. C. Martin Wood showed a patient affected with osteopsathyronis. A boy aged 14, normal size and healthy appearance had sustained 24 fractures of the long bones and several of the short bones. The first fracture occurred at the age of 3 years and the last one (of the olecranan) July, 1904.

Some pain accompanied these fractures but partial healing occurred quickly. The X-Ray showed fibrous union of an old hip-fracture.

Dr. W. A. Melton of Warrensburg read an interesting and well prepared paper on **Acute Anterior Poliomyelitis.** The discussion led by Dr. F. M. Anderson was earnest and to the point. It has been the experience of the society that arm paralysis in such cases is rare.

Dr. Ben Bachroch read a paper on **Intestinal Autoinfection** and related several cases. The paper was to the point and brought the idea that one can explain some obscure cases where a name cannot be given to the trouble by properly considering them those of autoinfection.

hTe society voted to use its best influence to aid in "re-establishing sound conditions" in the Medical Department of the Michigan University.

Twenty-three members and one visitor were present.

MACOUPIN COUNTY MEDICAL SOCIETY.

Regular meetings are held semi-annually the third Tuesday of April and October. Membership 40.

Officers.

President ..... S. A. Huffman, Chesterfield
Vice President ..... E. A. Bleuler, Carlinville
Secretary-Treas....J. Palmer Matthews, Carlinville

The Macoupin County Medical Society met at Girard, Oct. 18th, in the Odd Fellows' hall at 11 A. M.

Dr. Huffman of Chesterfield in the Chair. The following members answered to roll call: Drs. Huffman, of Chesterfield; J. P. Matthews and J. Palmer Matthews of Carlinville; Dr. Walton of Medora; A. T. Bartlett of Virden; C. J. C. Fischer, J. S. Collins, E. A. Bleuler and J. P. Denby, of Carlinville; G. R. Cowan, Albert Simmons, J. R. Mitchell, G. E. Hill, W. W. Van Wormer, of Girard; J. W. Thompson, Nilwood; Ben Hudson, Palmyra; E. K. Lockwood, Virden; Dr. F. Brother, of Beatrice, Neb.; and George N. Kreider, of Springfield. The minutes of the preceding meeting were read and approved.

The Treasurer reported $4.05 in the treasury. The name of Dr. E. R. Motley, of Keokuk, Iowa, was presented for membership by Dr. Bartlett.

The Censors reported Carlinville as the next place of meeting.

Program.

Essay—By Dr. John Pitt Matthews, on **Rheumatism.**

Essay—By Dr. Ben. Hudson. Subject: Selected.

Reports of Cases—By Dr. Walton: A finger was cut in the joint and the swelling subsided under a septic fomentation and recurred repeatedly, with absence of much inflammation, ending in enlarged gland in the hand.

A young girl suffering with amenorrhoea and fever, began to vomit when given cathartics for her constipation. Finally fever subsided and menstruation was established.

Dr. Hudson reported several slow fevers with severe prostration resembling La Grippe.

Dr. Matthews reported a case in Circuit Court of personal injury. An old lady fell on a board walk in the city of Virden and knocked the skin off her knee. Inflammation extended up the inside of the thigh along the lymphatics to the glands in the Scarpa's triangle. After five weeks two glands suppurated forming a bubo. The relationship between the original wound and the bubo was established and the patient was awarded damages by the jury.

Dr. Bleuler reported a case of appendicitis with removal of a ball of horse-hair which had been swallowed and lodged in the inflamed appendix.

Dr. Kreider spoke on the Journal of the State Society: "Chicago men are eminent and scientific, but they are apt to forget the 6,000 practitioners outside of their city. Many members of the Chicago Medical Society, which has interesting meetings once a week, think the Journal should be enlarged in its scope and should be made self-sustaining."

The speaker thought that the counties outside of Chicago should be given every chance to be heard. Liberty should be shown in admitting all to membership in societies.

Dr. Matthews said: "In my inaugural address as President of the State Medical Society, I said 'State institution appointments should be made from accredited members of the State Society,' and I heartily endorse Dr. Kreider's efforts to get the State Institutions managed by a non-partisan scientific Board."

Dr. Bartlett said: "While the present Governor is a good executive, he is culpable in his stand taken against the recommendations of the State Medical Society."

Dr. Kreider said: "It is good politics to have the State Institutions run in a scientific manner."

A motion was carried that a vote of thanks be extended to Dr. Ferd. Brother, of Nebraska, and Dr. Kreider, of Springfield, for their presence and interest in the Society.

Dr. Van Wormer reported a case of **Epithelioma** and presented the case to the Society. The X-ray had been tried mildly and had stimulated rather than destroyed the growth.

Dr. Thompson read an essay on **hyperchlorhydria:**

Hyperchlorhydria is a symptom of a disturbed nerve function with increased formation of hydrochloric acid.

We do not know all the constituents of gastric juice. Chemically, it is shown in suppression of the function of the kidneys. Toxic bodies are found in the intestines. Augustine found that the gastric juice of the epileptic when injected into a rabbit proved fatal, with general toxic symptoms and clonic convulsions. Hyperchlorhydria is a neurosis and occasionally an adaptation of the mucosa to increased demand for work.

Professor Pawloff has demonstrated the supreme role of the nervous system in the physiology of the gastric digestion. Hunger is a manifestation of mind. Sight or smell of food will bring about abundant secretion of saliva and gastric juice.

Fear will inhibit these secretions, while grief destroys both appetite and digestion.

We can conclude nerves in a state of abnormal irritability, may excite abnormal secretion, or hyper-acidity.

Frequent hyper-acidity of busy men is caused by reflex from overworked nervous system. Eating improper food too fast and with insufficient mastication and the abuse of tobacco are frequent causes. The influence of heredity is incontestible.

Two forms are classified. 1st. Chronic gastritis. 2nd. Neurotic condition only.

The symptoms of chronic gastritis with hyper-acidity: There is history of abuse of the stomach by irritating and excessive food and drink taken at irregular hours and in great haste. The glands become exhausted from irritation and an acidity and gastritis is plainly seen. In neurotic hyperchlorhydria, there is no history of indiscretion of diet.

The symptoms begin after a period of worry or anxiety in business: vis. Gnawing sensation below ensiform cartilage two hours after meals, relieved by eating.

There is eructation of gas and sour food. There is constipation. The patient gradually omits his articles of diet till he falls off in weight and strength. He becomes a hypochondriac. There is dilated stomach and splanchnoptosis.

The patient differs in appearance widely from one with hyper-acidity of gastric catarrh, who is well nourished and over fed.

Benedict's test is briefly: Give, at the height of digestion, 30 c. c. of sodium bicarbonate in water. The stethescope will note the bubbling of gas denoting free acid in the stomach. Treatment is to avoid any one symptom of the hypochondriac, but give a well balanced, bland diet, with regularity.

A milk diet is too bulky and the acidity may favor fermentation rather than digestion. 1-100 gr. of atropine may be given once a day. Ichthyol, 3. m. in capsules with olive oil should be given before meals and at bed time, producing a gain in patient's weight and strength.

Finally the patients are depressed and should be encouraged by suggestion.

Dr. Walton read an essay on **Obstetrics in Private Practice.**

In the city, with its hospital wards, the ideals of science reign, but with the knight of the buggy case, how different the environments!

The case is successfully treated when the child lives and the mother passes a normal puerperium.

The rural practitioner meets alone all conditions for which the city physician calls to his aid nurses, hospital and consultant.

The obstetric bag should contain castile and liquid etherial soap, hand brush, bichloride of mercury tablets, carbolic acid, alcohol, solution adrenalin, hypodermic ergot, fluid extract of ergot, sterilized vaseline, hypodermic syringe, Hale's obstetric forceps, minor operating case, chloroform, catgut and silk ligatures in original packages, sterilized rubber bandages of gauze and muslin, sterilized gauze strips, gauze packer, long dressing forceps, Grave's speculum, Cavana speculum, curette, subcutaneous infusion set, two-quart fountain syringe, one pound of sterilized cotton and a box of J. & J. baby powder.

The bed should be an oil cloth over a mattress. Place a pad of a dozen news papers between layers of a clean sheet. This pad will absorb all the fluids.

The patient should be given a full bath and put to bed with her gown drawn up over her shoulders to prevent soiling, and covered with a clean sheet.

The temperature should be such that no other covering is required.

With hot, boiled water, the hands are scrubbed with castile soap and finished with ether soap. A solution of 1-1000 bichloride of mercury is made to sponge the patient's pudenda when a complete vaginal examination is made to determine the stage of labor and if any dystocia is present render any assistance when necessary.

The patient is not required to keep her bed. The dorsal position in the second and third stage of labor is preferred.

The ante-partum douch is never used in normal labor. The post partum douche is only used in infected cases.

Chloroform has not been used in any uncomplicated cases. The conscious co-operation of the patient is a safeguard against injury.

The placenta is delivered as soon as the cord is cut by Crede's method of expression. By pressure the uterus is kept contracted until the abdominal binder is applied and worn for two weeks.

After a sponging with bichloride of mercury 1-1000 of the thighs and pudena, a vulval pad of absorbent cotton is applied to be renewed when necessary.

Fluid extract of ergot and morphine tablets are left for the after pains and the bowels are moved the second day with castor oil.

The child's mouth is cleared of mucus as soon as the head is delivered. After pulsation ceases the cord is tied with a large linen ligature. The child is wrapped in warm flannel and protected from draughts.

The body is annointed with sterilized vaseline. The cord is dressed in absorbent cotton and dusted with J. & J. powder when moist. It separates in about five days.

In all surgical procedures such as the repair of the perineum and cervix, version and instrumental delivery. Classical modern surgery is followed. All surfaces are treated with pure carbolic acid.

Rubber gloves are not used because the bare hands are more dextrous and speedy.

Visits are made on the 3d and 8th day. Careful attention is given to sore nipples to prevent mastitis.

On motion a vote of thanks was extended the Girard doctors for their hospitality. These papers were on motion accepted by the society as contributions.

Pamphlets on Consumption from the State Board of Health were distributed.

Society adjourned.

J. Palmer Matthews, Secretary.

MONROE COUNTY MEDICAL SOCIETY.

Regular meetings are held bimonthly at Waterloo. Membership 9.

Officers.

President, J. S. Sennott.....Waterloo
Vice-President, M. G. Nixon.....Columbia
Secretary, A. J. Lee.....Valmeyer
Treasurer, N. B. Pautler.....Waterloo
Delegate, L. Adelsberger.....Waterloo
Censors, J. C. Fults, Waterloo; O. Kuehn, Burksville; Dr. Kohlenbach, Columbia.

Society met in regular session, Vice President Dr. Sennott in the chair. Members present, Drs. Sennott, Vice-President, Adelsberger, Secretary, Lee, Fults, Kuehn, Schellschmidt, Nixon, Pautler and Kohlenbach. Minutes of previous meeting read and approved. The applications of Drs. Kohlenbach, Douglas and Pautler were referred to a special committee of censors, consisting of Drs. Nixon and Lee, and upon the committee's favorable report, the applicants were duly elected by viva voce vote, the rules having been suspended. Communications from the American Medical Association and Illinois State Medical Society relative to reorganization of the Monroe County Society, etc., were read and a bill of $1.75 for 100 postal cards and printing allowed to Chas. Dalkert. The election of officers being next in order the above officers were elected by acclamation.

The officers will take their seats in June, 1905. Upon motion of the Secretary he was instructed to send copies of Methods and Benefits of Medical Organization by McCormack, and the Organization of the Medical profession by Simmons, to every physician in the county not a member of the Society.

Dr. Kuehn related a case of a child (girl) 7 years of age, which at first he thought one of neglected malaria which was presented to him on August 13. On August 15, two days later he was attracted by the erratic temperature, which continued until September 15, the case presenting during this time symptoms of typho malarial fever but no pronounced symptoms of typhoid. During this period the pulse was never less than 100 nor more than 120, and the temperature ranged from 97° to 104° without apparent reason. He used Cactus and after depression of

heart alcohol. In the discussion Dr. Lee was of the opinion that the case might have been one similar to a recent case which came under his observation of inflammation of the bladder in which for no apparent cause the temperature was erratic for a considerable length of time. His diagnosis was typhoid, but Widal's test failed to confirm it. Dr. Sennott was of the opinion after examining the chart of temperature which Dr. Kuehn submitted that the case was one of malarial fever in which in addition to medication he would give a good liberal diet.

Dr. Fults suggested large doses of quinine in such cases.

Dr. Nixon was of the opinion that the case was one of typhoid fever, pure and simple, in which opinion Drs. Pautler and Adelsberger concurred.

Dr. Nixon related the case of a woman, age 31, married five years, who menstruated regularly during past two years and complains of constant cephalagia. Upon thorough examination, as to cause of headache, and finding none, the doctor suggested a uterine examination. The patient took the matter under consideration, and some months later, in March, 1903, returned to his office complaining as previously of headache and pain during menstruation. Upon examination he found a hard mass to the left of the uterus, and on March 26th, sent her to a hospital for further observation. Upon operation at the hospital a cystic ovary of the left side was found and a fibroid tumor in right horn of uterus removed, and a diagnosis of pregnancy made.

The patient continued to menstruate regularly every month and on Oct. 7, Dr. Nixon attended his "patient as accoucher, delivering her of one of the nicest little girls you ever saw."

Dr. Sennott asked for information as to what the consulting physician called the "blue mass" in uterus, to which Dr. Nixon replied that he, the consultant, diagnosed it as a foetus. Dr. Schnellschmidt asked the speaker relative to gastric disturbances prior to her confinement and was informed that the patient had not been subject to any gastric disturbances prior to her confinement and was informed that the patient had not been subject to any gastric disturbances whatever.

Dr. Schnellschmidt stated that in a number of cases he had seen with Dr. McMurtry of Louisville, of intra and extra uterine pregnancy, he could not recall one without gastric symptoms.

Dr. Lee read a paper of some length upon **Typhoid Fever**, its etiology, duration, symptomatology, and treatment which was discussed by all the members present; an especial attention being given to the dietetic treatment of typhoid, attention being called by Dr. Adelsberger to the smaller percentage of deaths in the West to those in the eastern portion of the United States, attributable only to the starvation diet upon which the western physician puts his patient.

The chair appointed Doctors Heidleberg, Fults, Pautler and Kohlenbach to entertain the society at its next regular meeting, Monday, June 5, 1905.

Adjourned.

McLEAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President.....F. C. Vandervort, Bloomington
Vice President ..... A. L. Fox, Bloomington
Secretary-Treasurer.....R. A. Noble, Bloomington
Censors: C. M. Noble, J. E. Fenelon, C. E. Chapin

The McLean County Medical Society was called to order by the President, F. C. Vandervort at 7:45 P. M.

The minutes of the last meeting were read and approved. The Board of Censors reported favorably on the name of Dr. Frank Potts and upon vote of the Society, the Secretary cast the ballot favorably for Dr. Potts.

Dr. Hugh Hoover, Dunham Medical College, 1900, Stanford, was presented for membership by Dr. A. R. Penniman and referred to the Board of Censors.

Dr. Lee Smith, for the Committee on Publication, reported progress and expressed the wish that the Committee's work would soon be completed.

Dr. F. C. Vandervort stated that upon learning of the death of Miss Parkhurst, daughter of Dr. F. Parkhurst, he had sent a floral offering in behalf of the Society and that he had appointed Dr. E. Mammen and Dr. J. Whitefield Smith to draw up resolutions for the Society. Dr. E. Mammen presented the following resolutions:

A TRIBUTE.

How true and yet how sad are the words of the poet in "The Hour of Death" when she says:

"Youth and the opening rose
May look like things too glorious for decay,
And smile at thee—but thou are not of these
That wait the ripened bloom to seize their prey."
—Hemans.

Youth symbolizes the immortal part of our nature. The finer the organization and the greater the ability, the more difficult and trying are its experiences.

There are moments in the life of the young imagination when the splendor of its dreams fills the soul with rapturous delight and possibilities, because youth is possibility; that is its charm, its joy and its power. But in reaching its perfection of beauty, the flower must part with the dewy promise of its earliest growth. If perchance the shadow of that crisis we call death should fall upon youth's morning, the possibilities of the soul are then developed in the life beyond.

Such is the case. A dear young life has gone out of the home of one of our number. Miss Frances, daughter of Dr. and Mrs. Fred Parkhurst has gone from them in her youth.

This Society in the depth of their feeling, desires and does hereby express their deepest sympathy to these bereaved parents.

Instead of mourning let us look up and address her in the words of the poet:

"Thy day has come, not gone,
Thy sun has risen, not set;
Thy life is now beyond
The reach of death or change,
Not ended—but begun.
Oh, noble soul, Oh gentle heart,
Hail and farewell."

Dr. E. Mammen reported for the Executive Committee of the McLean County Medical Society having in charge the local arrangements for the State Society. Report showed surplus of $105.00. The Society had voted $50.00 to the Business Men's Association for the use of the Sanitary Committee and the balance to be turned over to the Treasurer of the County Society, to be disposed of by vote of the Society. The State Society have made demands on the executive committee for the surplus money, claiming this to be in accordance with previous custom and in accordance with by-laws adopted at the meeting held here in May 1904. The Executive committee of the local Society do not agree with the State Society and the money has not been turned over to the State Society and no report has been made to the State Society. Committee asked to be discharged. Moved and seconded that the committee be discharged and the report adopted. Drs. Mammen and C. M. Noble, on question of privilege, gave further explanation of the situation, showing that the State Society had refused to be responsible for any deficit should any occur; that the local executive committee was appointed by the local Society and not by the State Society; that the local executive committee had no recognition from the State Society, no invitation to meet with the State Society and was in no manner a creature of the State Society.

Dr. C. E. Chapin and Dr. Lee Smith spoke in support of the committees action and the Society unanimously approved.

A communication from Dr. J. B. Taylor, outlining the report of the Sanitary Committee for November, was read and the report approved. Arrangements left to the President and the Sanitary committee.

The following bills were allowed, Nimrod Mace, $12.50; R. A. Noble, $4.00; Illinois State Society for thirty-four memberships $51.05.

A communication from the Secretary of the State Board of Health relative to the establishment of a Free Labratory for the examination of sputa, blood, etc., was read.

Dr. F. C. Vandervort read an able address, complimenting the members on the harmony which prevailed among the members and pointing out the importance of a Fraternal feeling among the Physicians.

Eighteen members were present and thoroughly enjoyed the timely remarks of Dr. Vandervort.

PROGRAM FOR COMING YEAR.

November.

Report of Health Committee on **Bacterial Investigation of Milk Supply.**

December.

Medical Jurisprudence, W. W. Whittmore.

January.

Practical Application of Routine Blood Examination, Dr. Ralph Fox.

Discussion led by Dr. J. K. P. Hawks.

February.

Rheumatism, Dr. Edson Hart.

Discussion led by Dr. T. J. Mullen.

March.

Surgical Tuberculosis, Dr. W. E. Guthrie.

April.

Annual meeting.

Address, **Senile Gangrene,** Dr. Geo. N. Kreider, Springfield.

Election of officers.

May.

Headache; Its Significance in Disease, Dr. O. M. Rhodes.

Discussion led by Dr. E. S. Reedy.

June.

Tetanus. Report of a Case with Recovery, Dr. L. J. Hammers.

Membership.

Absher, A. A., Sibley; Adams, E. M., Gridley; Albright, A. C., Sibley; Allyn, Danvers; Ayling, C., Gridley; Ballard, H. F., Chenoa; Balcke, W. A., Cropsey; Bath, W. T., Bloomington; Bane, S., Ellsworth; Banks, J. H., Atlanta; Boulton, S. S., Hudson; Bonnett, J. Y., LeRoy; Brown, E. L., Bloomington; Carr, C. R., Bloomington; Chapin, C. E., Bloomington; Chapin, H. S., Holder; Chapman, A. L., Carlock; Cody, J. M., Tremont; Coss, W. A., Danvers; Crocker, F. L., Weston; Covington, E. G., Bloomington; Covey, J. E., Bloomington; Dally, H. M., Bloomington; Douglas, D. F., Colfax; Elder, D. G., Bloomington; Elder, H. W., Bloomington; Fenelon, J. A., Bloomington; Fox, A. L., Bloomington; Fox, Ralph, Bloomington; Fulwiler, J. W., Bloomington; Godfrey, F. H., Bloomington; Golding, D. G., Arrowsmith; Gordon, R. E., El Paso; Guthrie, W. E., Bloomington; Hammers, L. J., Lexington; Hart, Edson, Bloomington; Hawks, J. K. P., Bloomington; Hearing, O., Bloomington; Henton, A. F., Bloomington; Heyward, C. E., Cropsey; Hall J. Whitney, Chicago; Hill, William, Bloomington; Howell, H. L., Bloomington; Horn, W. L., Boulder, Colo.; Hull, M. D., Bloomington; Hyndman, Eliza J., Bloomington; Jackman, F. O., Bloomington; Kell, H. A., Hospital; Kaeser, A. F., Highland; Keith, Lou S., Towanda; Keys, T. W., LeRoy; Kunkler, J. E., Bloomington; Little, J., Bloomington; Mammen, E., Bloomington; Meyer, A. W., Bloomington; McCormick, F. C., Normal; McCormick, N. K., Normal; McIntosh, Wm., Anchor; Mittan, F. J., Decatur; Mullen, T. J., Bloomington; Noble, C. M., Bloomington; Noble, R. A., Bloomington; Noble, J. P., McLean; Nusbaum, D. H., Storm Lake, Iowa; Orner, C. T., Bloomington; Peers, Ralph, Normal; Parke, C. R., Louisville, Ky.; Parkhurst, F. J., Danvers; Penniman, A. R., Stanford; Reedy, E. S., Bloomington; Rhodes, O. M., Bloomington; Rogers, A. E., Bloomington; Sargent, E. E., LeRoy; Shinn, W. R., Chenoa; Skaggs, L. A., Ellsworth; Sloan, E. P., Bloomington; Smith, J. Whitfield, Bloomington; Smith, G. R., Bloomington; Smith, Lee, Bloomington; Speer, L. E., Shirley; Stevens, S. L., Dalton City; Taylor, E. M. K., LeRoy; Taylor, J. B., Bloomington; Turner, Frank, Heyworth; Tuthill, J. A., LeRoy; Vandervort, F. C., Bloomington; Welch, F. J., Bloomington; Wakefield, F. L., Heyworth; Weiland, E. G., Bloomington; Winter, H. A., Saybrook; Yolton, R. G., Bloomington; Yolton, J. L., Bloomington.

Deceased 1903-1904, Dr. S. L. Chapin.

Chicago Medical Society.

The Medical Society of Cook County, Regular meetings are held every Wednesday evening from October to June at the Chicago Public Library Building, Randolph Street Entrance in the large hall on the ground floor toward West end of the Building. Membership 1512,

OFFICERS:

J. B. MURPHY, 100 State Street..... President
FRANK X. WALLS, 4307 Ellis Avenue.....Secretary
A. E. HALSTEAD, 2937 Indiana Avenue.....Treasurer
W. A. EVANS, 103 State Street ..... Chairman Medicolegal Committee
WM. HARSHA, 103 State Street .....Chairman Membership Committee

NOVEMBER, 1904.

A regular meeting was held October 5th.

Prof. Coromilas of Athens, Greece read a paper on **the use of bisulphide of carbon in the treatment of tuberculosis.** This long and exhaustive paper being too extensive for our columns we give the main points in abstract. The professors based his statements on the favorable results obtained in Greece and France since 1891-92. The point he especially emphasized was that the hypodermic use of this remedy exerts a favorable influence on the white blood corpuscles. The use of the same remedy by intra-tracheal instillations is also recommended. The professor himself has treated 66 patients including pulmonary disease in its several stages, lupus, spondylitis, anal fistula, tumor albus of the knee and shoulder and tuberculous peritonitis.

The favorable results of the treatment are attested by letters from Dr. Auguste Poizier and Dr. P. Roger and Dr. Bessan superintendent and attending physicians respectively of the Pean International Hospital, Paris, and by Dr. F. de Martigny of Montreal, Canada. His conclusion was as follows. My extensive experiments, the favorable opinion of eminent scientists of Greece, France and Canada have induced me to leave Greece and to salute respectfully the new world, so illustrious and so much admired by all contemporaries; the land of labor, of progress, of fraternity and equality; the land that receives in its bosom and protects alike all those that ask for help without consideration of race, country or religion. For these reasons and because of my satisfactory results I conclude

(1) That the bisulphide of carbon as administered by me has no disagreeable results.

(2) It has a strong action against the bacillus tuberculosis.

(3) Because of its parasitic antizymotic, antiseptic and inoffensive action it is capable of penetrating all tissues and in this manner cures tuberculosis.

(4) Consequently it should not remain unknown but should take its place in therapeutics as one of the specifics of our time capable of doing immense service to suffering humanity.

(The paper was not discussed.)

Some Common Errors in the Treatment of Pulmonary Tuberculosis. Dr. Norman Bridge, in a paper with this title, read at the same meeting, said that the current methods in the treatment of the pulmonary form of tuberculosis averaged better than those of old. Results showed this fact. The mortality of tuberculosis had been reduced in less than three decades by probably 29 per cent of the former figure, or from 14.25 to 10 per cent of all deaths. These results were not accidental, but were clearly due more to the better management of the pulmonary form than to any other influence. He said it was somewhat easier for the practitioner to think that quinine or cod-liver oil, or creosote, or a change of climate, some inhalations of drugs or a so called antitoxin, was good for tuberculosis, than it was to understand the great first purpose of all treatment was to increase the physiological power of the patient to resist the disease and destroy or circumscribe its course within his own body. With all our study and experimentation, and notwithstanding all our theories and hopes, this truth stood as the one cardinal postulate of the subject up to the present moment. Our greatest and most common error had been against this truth, and the results had been correspondingly sad. To give creosote to the extent of lowering the digestive power, or to give serum injections to the production of phlegmons and higher temperature, or to give coal-tar drugs for fever, while the patient was allowed to go on in his usually unhygienic course of life without advice of correction, was an error so awful in its results that not even confession and penance were sufficient atonement. And all practitioners had sinned in some of these directions, and some of them grievously. Every patient should be constantly supplied with outdoor atmosphere in such abundance that every successive inspir-

ation brought a fresh dose of air to the lungs and none from previous expirations. Every one should have long hours of rest; if feverish, the rest recumbent should be almost or quite constant, for exercise increases the fever. The digestive powers should be made to do their best under the most careful supervision and direction toward improving the nutrition and possibly also the resisting power of the patient. Practitioners have believed the patients who say they could not eat because they had no appetite, forgetting that a patient could usually be led to take the right food as well as to take medicine. Practitioners have agreed with the patient's theory that an appetite is necessary, and that food must be adjusted to the appetite; whereas, the truth was that in tuberculosis the food ought to be adjusted to the patient, and the appetite to be ignored almost completely. A tuberculous patient was never helped to resist the disease by muscular development above his normal standard. A consumptive's body should always be well and equably clothed, and never be hampered or restricted by garments. Snug corsets and conventional gowns were an abomination for the tuberculous woman. Worn as they were by most such women, they frequently tipped the scales in favor of death rather than recovery. Pulmonary tuberculosis was a long disease, and required a long and steady course of the best hygiene and management to ensure final and lasting recovery. Climatic treatment of tuberculosis had rightly become popular the world over; yet he was compelled to the belief from abundant observation that of all the remedies prescribed for the tuberculous, one of the most unfortunate and unsatisfactory was climate as it was usually employed. Going away for climate was one of the most abused and misused of all the great measures for the sick; and so ought to be a blessing unspeakable often became a pitiful deception and a vision of death. This misfortune was largely an error of the people, but the profession was greatly at fault about it also. In more than half of the instances where it was advised it was for the wrong kind of cases, or at the wrong time, or for the wrong people; that is, with poor regard for all the circumstances in the situation. The author mentioned a list of faults of climatic treatment. Finally, the surest proof of skill and usefulness of a physician was his capacity to turn to the benefit of the sick the simple and homely facilities that were all about them. The best results with the fewest tools was the test; and no more inviting task was ever offered to physicians than to bring to the thousands of tuberculous victims, who were unable to go properly to the better climates, and at or near their homes, the benefits of the modern treatment of this disease. And it could be done, either in their own houses or in home sanatoria, and done superbly in a large proportion of cases. If it were done, it would reduce the mortality another ten per cent, and it would be done, for the twentieth century internist was capable of it, and he must not fail.

Dr. Hugh T. Patrick showed a **Case of Idiopathic Muscular Atrophy,** the patient being a young woman, twenty years of age, whose trouble began at the age of twelve. She had never been able to close her eyes tightly. She had never been able to whistle or pucker the lips normally. There was marked lordosis. At the age of twelve she was noticed to walk in a peculiar manner, with the shoulders thrown back. The muscles about the arms and shoulders were very weak, and although the deltoids were large and hard, they were weak. There was more or less weakness of the scapula owing to paralysis of the serratus. The case corresponded with the Landouzy-Dejerine facio-scapulo-humeral type. The patient had an affection of the gluteal muscles, and of the psoas and iliacus, whereas the muscles in the lower limbs were good. She could not raise her toes so as to stand on the heels. The case was atypical in distribution, in that it partook of many of the different types. The kneejerks had almost entirely disappeared when she was admitted to the hospital, but under large doses of strychnine they became distinct, so that now they were normal. Dr. Patrick showed next a case of multiple neuritis, which manifested several interesting features. A third case was one of acroparesthesia nocturna in a young woman, twenty-three of age, who had had this trouble for two years. She was not troubled during the day. In the night she would awake with numbness and tingling which was so intense as to almost amount to pain. The attacks began in the right arm, paralyzing it for the time being, but after getting out of bed, rubbing the arm, putting it in hot water, shaking it, etc., the tingling disappeared, after which she would go back to bed. As a rule, she got this tingling only once in the night. The next case was one of cervical rib. He said cervical rib was not frequent, and most of the cases of cervical rib had been discovered accidentally, either post-mortem or during an examination for other trouble. He showed other cases of muscular atrophy and of multiple neuritis. His last case was one of Caisson disease. The patient could not use his leg below the knee. Patient worked in a caisson, seventy-five feet below the surface, in which the pressure was twenty-five pounds to the square inch. He felt no inconvenience from working aside from pressure in the ears. After working in a caisson for some time, he began to feel tingling and numbness in his legs, so that they eventually became useless. He felt this tingling in his arm also, lost consciousness, and was unconscious the first night after the attack. The next morning his legs were paralyzed. He felt dazen and confused. His arms were all right the next morning, but his legs were completely paralyzed. The speaker said that this disease could be avoided if proper precautions were taken.

Dr. Charles L. Mix reported a case of **Traumatic Neurosis Associated with Tabes** in a Negro. He said that the cases were unusual. Clinicians of large experience had described but very few cases. In this case the tabes was clearly traceable to specific infection, but the patient's neurosis was caused by a railroad accident.

At the regular meeting held October 12, Dr. Thomas read a paper entitled **The Scien-**

tific **Struggle to Cure Pulmonary Tuberculosis in the United States Since 1882.**—See page 544. Dr. J. W. Pettit of Ottawa, presented a paper entitled **Some Practical Phases of the Tuberculosis Question.**

Dr. Thomas has given us a very complete resume of the treatment of tuberculosis since Koch's discovery of the tubercle bacilli. He also coincides with the views so generally accepted by the profession that the so-called open air and dietetic treatment is the only one that offers practical results. Notwithstanding this fact we have not applied our knowledge with that vigor and promptness which should characterize our profession. The reason of this perhaps lies in the fact that home treatment is not as a rule practicable; first, because so many cases occur in families where it is not possible to make the application; and second, where patients are more favorably situated, it is impracticable for the reason that the modern methods have not been accepted by the laity with that degree of confidence so essential to applying the treatment successfully. A third reason might be given, that the methods are not well understood by the average physician and where they are, they consume so much time and energy that it is hardly possible for the busy physician to get the time from his other work to devote to the few patients whom he may have under his care. In other words, it is practical rather than theoretical reasons why the treatment which is so generally accepted by the profession is not more in vogue. I am a firm believer in the practicability of the home treatment in tuberculosis, but I believe before that time comes, the education of the public and profession must come through sanatoria. That sanatoria are to be the training schools which shall be centres of influence in propagating the new doctrine and its methods; therefore I believe it will be wise for the profession to devote its energy to the establishment of sanatoria rather than take the risk of bringing the modern treatment into disrepute by the many failures which must result through lack of experience on the part of patients and friends. I am inclined to emphasize this fact by reason of my personal experience in endeavoring to carry out the essentials of treatment in the home life of my patients. I have made some brilliant successes, miserable failures, and refused other patients who could and would have been benefited, if the attempt had been made in properly conducted sanatoria. The conditions seem to be analogous to the boy who attempts to secure an education at home, surrounded by the distractions of home life. He can do it if he has more than the usual amount of persistence and is not too easily discouraged. In other words, the exceptional person may secure an education in this way, but the rule is that those who attempt it will fail. So it is with the attempt to cure tuberculosis at the patient's home and for substantially the same reasons. The difficulty lies in the fact that in either case, the other members of the family must conform to the life of the student or patient, a thing rarely ever practicable and frequently not even possible. Even were it possible to so order the affairs of the family as to conform to the interests of the patient he would still lack the moral support of others afflicted as he is. The soldier who can touch elbows with his comrades is braver and more efficient than the lone sentinel who is left to fight alone.

After all, the success of the modern treatment of tuberculosis does not depend altogether upon what can be done but what patients will accept. It is not enough to place before these patients an opportunity to get well. They must accept what is offered. Otherwise it is useless. Many of them are apathetic, most of them whimsical and impatient of restraint. This makes the task of carrying out a long course of treatment always difficult and too frequently disappointing. This may be assigned as an additional reason why home treatment will so frequently fail under present conditions. My experience thus far has demonstrated that it is difficult to keep out of sanatoria the advanced cases for whom little or nothing can be done, and more difficult to hold the patient for whom I can do much. The patient who improves rapidly is soon restored to his normal weight, feels perfectly well, can see no reason for remaining in a sanatorium where so far as he can see all there is to the treatment is to eat, sleep, and live in the open air. He cannot distinguish between his feelings and his actual condition, hence becomes impatient of restraint and, notwithstanding the earnest entreaties of his medical advisor and his warning that such a step is fraught with danger, the average patient will leave just at a time when his recovery is assured, but not yet complete. Some of them go home, carry out the essentials of the treatment and do well. Others return to their old life, are soon as bad or worse than ever, and as a result the failure is charged up to the method of treatment.

The difficulty at present lies in the fact that the impression seems to prevail that the treatment is not only pleasant but easy. The patient is recommended by his physician to go to a sanatorium, with the understanding that all he has to do is to eat the best of food and live in the open air. He is apt (and particularly of a young person) to regard the whole affair as an outing. The novelty appeals to him. When this is worn off the life is apt to become irksome. If he improves he elects to say how long he shall stay. If he does not he makes this an excuse for returning to his home. In this we are met with the fundamental fact that the average patient is much less concerned about his welfare than are his friends and medical attendant. I greatly fear that the enthusiastic reception given the modern treatment of tuberculosis, will not continue. This unfortunate contingency may be very largely obviated if, in disseminating the new doctrine, we as medical men, will be more careful to emphasize the fact that there is no royal road to health for the tubercular patient any more than there is to knowledge. That the modern treatment holds out no hope to him, unless he is willing to accept all the conditions which it imposes. Cornet has summarized this whole

question in the statement that, "Without the co-operation of the patient the physician can do nothing."

The teaching that is so prevalent among physicians at present, that the treatment is not only simple but easy, that anything is good enough for the tubercular patient, is extremely pernicious. The doctrine that comfort should not be considered is baneful in its effects. We must bear in mind that all our recommendations, when generalized, must apply to the average patient. The exceptional patient may be willing to live on a fire escape, the roof of a house, a tent, or an old shack in the back yard, to be exiled from society, always be expected to eat the right kind of food, whether he wants it or not, exercise intelligently, and accept all the other conditions which such a life imposes. The average patient will not, hence the recommendation is useless. For my part I can see no reason why the tubercular patient should not be made comfortable during the course of his treatment. This is not inconsistent with the essentials of treatment. I believe it can be made attractive in many ways and that every effort possible should be made to do so. Because we have discovered the correct principle of treatment, we are too prone to ignore the fact that success depends quite as much upon correct methods as upon the principle itself. We are inclined to regard methods as either very simple or a matter of indifference. This is where we err and wherein the treatment fails it will be the result of such indifference to methods as I have indicated.

Another practical point and one which is essential to success is the importance of an early diagnosis. It is self evident that the earlier the diagnosis is made the more certainly can a cure be effected. The profession must awaken to a realization of the fact that if the disease is not diagnosed until it is well advanced, as is now too often the case, the time when a cure could have been effected may have passed. Unfortunately such mistakes cannot always be remedied. Many a patient's life is sacrificed because a diagnosis is not made early enough for him to avail himself of the advantages of treatment. As physicians we should be on the alert to recognize the disease early and if, after the most painstaking efforts, we fail to diagnose the disease, and still have reason to suspect it, we should give the patient and, not the disease the benefit of the doubt by promptly placing him under proper treatment.

The balanced ration is an essential feature in the treatment of tuberculosis. Since the whole question is one of nutrition it is essential that the patient be fed, not what his appetite may suggest, but a balanced ration, which shall contain from day to day all the elements of nutrition, which the tubercular patient so much stands in need of. In order to accomplish this the one who prepares his food must have a scientific knowledge of food values. Not only is this essential but the palatable preparation and the esthetic service of the food is quite important. This can only be done by cooks who have had scientific training such as is given in the best domestic science schools. This leads me to suggest that domestic science as taught in many of our technical schools will play an important part, and should occupy a conspicuous place in the treatment of this disease. To this end, and with this in view, I have the honor, as I believe, to have secured the services of the first domestic science graduate who has engaged in this work.

We are now seeking to arouse a public sentiment that will result in the establishment of state sanatoria for the care of the unfortunate poor who may be afflicted with tuberculosis. I trust we may guard against the mistake that has been made in all our state institutions, without a single exception. Money has been lavishly expended in the erection of buildings and equipment. The observing person who visits these institutions is apt to get the impression that they are maintained for the benefit of those who minister to the wards of the state, instead of the unfortunate classes in whose name they are established. While we should have due regard for the comfort of the tubercular patient, it is not necessary, neither is it desirable, that they should be housed in expensive buildings. Perhaps no class of patients can be more cheaply provided for in this respect than consumptives.

The true function of the sanatorium should be regarded as a training school. Not with a view to keeping the patients until they are entirely cured, but to demonstrate to them the benefits of the treatment, teach them how to live and send them home to complete the cure and be centres of influence in propagating the new doctrine in their respective communities. By carrying out this idea many more patients can be accommodated, and the salutary influence of the sanatorium be more largely felt.

Working out these practical phases of the question is a much less inviting field of operation than is the scientific investigation of the subject. A scientific fact is of but little value unless practically applied. We cannot all occupy the more fascinating field and exalted station of the investigators. Many of us must be "hewers of wood and drawers of water." For my part I am willing to take my place with the latter class. If we occupy a less conspicuous and exalted position our work is none the less important. It is our duty to put into practical operation the scientific truths in relation to tuberculosis, which investigators have elaborated after long and patient research. This involves the education of the public generally and can only be accomplished by thorough organization of all the social factors. From the present standpoint of ignorance and apathy, both lay and professional, it seems a herculean task. Illinois is the first state to undertake a systematic and comprehensive organization. Much has been done already, but the task is only just begun. The medical profession have very properly inaugurated the present crusade. They must continue to lead and direct it. In this we should be prompted by a sense of duty. If not, our professional pride should stimulate us in completing a work which has been so auspiciously begun. Per-

sonally I have no doubt whatever that the crusade will be skilfully conducted; that the forces now being organized will soon give such an impetus to the movement that within a few short months indifference and skepticism will yield to an enlightened public sentiment, which will not only care for those afflicted with the disease, but relegate the "great white plague" to the place in the list of diseases where it belongs.

These are some of the many practical phases of the question which must be met in the solution of this great problem.

Traumatic Neurosis Associated With Tabes.

Dr. Charles L. Mix: I shall not take up very much of your time, owing to the lateness of the hour; yet I wish to show this case on account of the unusual association of two affections. Dr. Patrick has just presented a case in which hysteria was associated, in slight measure, with tabes, and the case I show you now is one in which traumatic neurosis is so associated, and in which the neurosis practically overshadows the tabes. The case is one of railway accident. This man, colored, was in a Rock Island sleeper when it was butted into by a row of freight cars, and he was given a bad shaking up. Immediately after that, according to his statement, he began to notice trouble. The trouble was not very severe, but as time went on it became aggravated. The accident happened two years ago.

It is unnecessary to say anything relative to tabes in the negro. Such cases are unusual, but they exist. Clinicians of large experience have described but very few cases; possibly it is true that in Chicago we have more than our usual share.

The first thing that is striking in this man's case is the changes in the sensory disturbances as they are ordinarily seen in tabes. When I touch with my brush the left side of his face he says he does not feel it. When I pass the brush successively across the face, he says that the sensation changes in the midline, as I go from right to left. Everything to the left of a line drawn vertically downward about one inch to the left of the midline of the body is anesthetic. Instead of the anesthesia being exactly limited by the midline, the line of demarkation between esthesia and anesthesia, is to the left side of the center; and such deviation is common in cases of this sort. Not only is there anesthesia, but there is also analgesia. Over the shoulders and on the back he says it feels as though I was trying to pinch the skin, when I attempt to loop it up and insert a pin. A pin so inserted (illustrating) apparently causes him no pain. Very frequently in these cases there is a certain amount of dermographia, but it does not show upon his dark skin.

In a case of this nature, where we find such a symptom-complex, we should expect to find, on examining the reflexes, great increase in the patellar-jerks. (Patient crosses one leg over the other, and Dr. Mix tries to elicit the patellar reflex.) In this case, however, the knee-jerks are absolutely abolished. When we try to obtain his Achilles reflexes, they are found to be completely absent. It is hardly necessary to go into details in regard to the entire symptomatology of tabes. He has the Argyll-Robertson pupil, but not absolutely perfectly. It is perfect in one eye, and almost perfect in the other. The girdle sensation in his case is described very nicely. He tells me that not infrequently he has looked to see whether his under-garments were not too tightly buttoned around his waist, because they felt that way; and yet he has always found them as they should be.

In examining the deep sensibilities the loss of which furnishes one of the first symptoms of tabes, we find an absolute loss on the left side of the body, but a very slight loss on the right side. It is utterly impossible to say how much of the loss of the deep reflexes on the left side is due to the traumatic neurosis, and how much is due to tabes. The probabilities are that a large part is the result of the neurosis.

I have looked up the subject of trauma in relation to tabes, and so far as I can find, there are but two recorded cases of the association of traumatic neurosis with tabes. Both of these were published in the Zeitschrift fur Nervenheilkunde last year. In one case the only symptom was a tremor, with more or less photophobia, and in the other case there was a certain amount of paresis.

In these cases of association of trauma with tabes, there are two questions which are perfectly legitimate, the first one of which is this, does tabes have any relation whatever to trauma? Can trauma be regarded as an etiological factor? I think the answer must be no. If we think for a moment of the pathogenesis of the tabes, we are obliged to say no, because undoubtedly tabes is a toxemia. It is a toxemia which, in ninety per cent. of the cases, if not a hundred, is due to syphilis; and in this case it is of that nature. The papery, whitish scars on his leg are conclusive proof of the fact that there has been specific infection, although it is denied. Remember that there is a law suit in this case, and it does not pay to admit too much even in a clinic.

A theory of tabes is that advanced by Obersteiner and Redlich, in which it is supposed that there are thickenings of the pia mater, cutting off the posterior nerve roots, and giving rise to the shooting pains of which this patient has a good many. But it is impossible to figure out trauma as the cause of such an association. The only traumatic theory is the one advanced by Hitzig, in which the statement is made that severe crushing wounds or injuries may set free certain toxins in the blood, which may cause degeneration of the columns of Goll and Burdach. Whether this is true or not, it is difficult to say. Anyone would be inclined to say that such an association cannot exist. Trauma can never cause tabes.

Another question is whether tabes can be brought out, when it is in a more or less latent state, by trauma. This is an entirely different question. There are many cases given in the literature which would seem to substantiate an affirmative answer.

The first of these traumatic cases were gathered by Klemperer in 1890, consisting of some 30 cases reported in the literature, and four of Klemperer's own, making 34 in all, in which the theory seems to be fairly well established that trauma may give rise to tabes.

Hitzig, in 1894, reported two cases of his own and nine others gathered from Klemperer's 34, making a total of eleven cases in which it was shown that tabes could be caused by trauma. The view taken by Marie is that tabes can only be accentuated by trauma, but never caused by it. He is a staunch believer in the theory that tabes is invariably specific.

The last article, as far as the literature is concerned, is one by Schittenholm, appearing in the Zeitschrift fur Nervenheilkunde in 1903, in which 17 cases are reported, the original eleven of Hitzig, and six from the Breslau clinic. Of these, 2 were associated with a traumatic neurosis.

I have seen one other case of tabes in a negro, and it too was associated with trauma. That case was undoubtedly one of latent tabes, lighted up by the injury. The patient had marked ptosis, and a lesion of the internal rectus of the same eye, a third nerve nuclear lesion beyond question.

These two cases prompt me to say that trauma can accelerate or bring out tabes which has been more or less latent, but they do not warrant any such conclusion as that tabes can be caused by trauma.

NORTH SHORE BRANCH.

Officers.

Chairman..G. W. Green, 1296 E. Ravenswood Park
Vice Chairman.....L. L. Gregory, 1377 N. Clark st
Secretary....Geo. Edwin Baxter, 1916 Evanston ave
Councilor.....J. P. Houston, 1180 Sheffield ave
Alternate Councilor.....A. Young, 550 Wilson ave

Committeemen:

South Subdistrict.....H. B. Williams, 100 State st
West Subdistrict.....R. E. Green, 70 State st
North Subdistrict..Bertha E. Bush, 808 Morse ave
East Subdistrict..?.....J. A. Patton, 100 State st

Meeting of North Shore Branch held in Ravenswood club house Tuesday evening, October 4, 1904.

The following program was given:

Program.

"The Duty of the General Practitioner to the Public."

1. As a Physician, J. Allen Patton.
2. As an Educator, J. P. Houston.
3. As a Financier, W. A. Abbot.
4. As a Politician, G. DeTarnowsky.

On motion the Society adjourned.

George Edwin Baxter,
Secretary.

The Duty of the Physician to the Public as a Politician.

George DeTarnowsky, M. D.

The duty of the general practitioner to the public as a politician—is to keep out of politics. I use the word politics here in the looser sense, as meaning "the contests of parties for power." It is practically impossible to dissociate politics from party politics in the U. S. today, and it is an undeniable fact that close association with local party organizations is not as a rule placed to the physicians credit. The community looks askance at the young Doctor who busies himself too openly over the election of his party candidate, for it is seldom that there are issues brought up which would have any direct bearing on the morals or sanitation of the community; or, if there are, both parties are as a rule pledged alike to them, and the war dwindles down, not to one of platform or personality, but to a party war pure and simple. These remarks apply of course to municipal politics. I shall later advance other valid reasons why the American physician is unable to enter State or national politics. I repeat then that the physician who becomes a local politician becomes *ipso-facto* a party politician, and as such loses caste in his community regardless of the motives which have prompted his affiliations.

The physician as a politician may belong to one of three distinct types. Type one is the ward heeler who enters the political gutter "for what there is in it" and, who, in the often vain hope of adding to his practice, associates himself with the local boss and does his bidding. This black sheep is a "good fellow," knows every member of the local gang and can call them by their nicknames; should any of them get hurt in a drunken brawl or overheated political discussion, "Doc" is called in to sew him up—his fee for services rendered being—in part at least—doled out to him over the bar, in liquid form. Is he a grafter in the strict sense of the word? No, he probably has never received money for any of his political duties, but free tickets, passes, appointments as examiner for local fraternal lodges, cigars and drinks, come to him as a matter of course. What does he give in return? His "Boss" asks him to work for so-and-so, and "Doc" does the master's bidding. The party nominee is represented by "Doc" as being friendly to physicians and an ardent advocator of improved hygiene and sanitation; one who, if elected, will pave the streets of your ward with good intentions. He never fails to add that "so-and-so is a good friend of mine and I will esteem it a personal favor if you will vote for him and use your influence in his behalf." Between elections, I had almost said drinks, he adds to his income and political pull by "fixing up" leave of absence or pension certificates and attending to the Flotsam and Jetsam of a tough ward. My first experience with "Doc" was while a medical student, and I regret to say I did not "catch on" until I had smoked up my bribe—the first and last I have accepted. "Doc," who had graduated several years ahead of me and located not many miles from my Alma-Mater, met me one day on the street with the heartiest "glad-hand" imaginable and a good cigar which he asked me to smoke "on him," adding that "there were plenty more where these came from." A discourse on local politics soon followed, in the course of which he mentioned Mr. A. as the man to vote for as he was "straight with the party and 'in' with the boys" —whoever the boys might be. "There he is now, he added, as we approached a corner saloon; come along and shake hands with him."

I meekly allowed myself to be presented to the local "Hinky-Dink" along with a Pullman porter and a local Pugilist. All three of us were introduced to "Hinky" as "personal friends of mine sir, who are anxious to vote for you when the time comes." The time never came—for me at least—but I can still taste that cigar. My second experience occurred while serving as Interne. A certain member of the police force was brought in suffering from a good old fashioned attack of Delirium Tremens which promptly carried him off. Post-mortem all the evidences of chronic alcoholism were found and a certificate delivered accordingly. I soon had an infuriated family interviewing me to change the findings, in order that they might get a pension from the city. I refused to do so whereupon they got their ward "Doc," who "stood in with the boys," to fix one up in which the cause of death was given as "Chronic Cystitis, the result of a blow on the abdomen received while on duty!" I hunted "Doc" up myself afterward and wormed these details out of him. The policeman's family got a pension and paid handsomely for that certificate. Does it ever pay to go into dirty politics? Has any "Doc" ever carved an honorable name for himself or built up a lucrative practice? I am sure he has not—such black sheep never become family practitioners, because even professional politicians often have a warm spot in their hearts for those at home and will not employ the man who does their dirty medical work for them. What is his future? His friendly and influential Boss is suddenly swept away by some irresistable reform movement or superceded by another of his kind and our erring confrere finds himself deprived of his "soft snaps." All of you who have been reading Lincoln Steffens masterpiece articles on state politics will remember the ultimate fate of "Doc" Ames of Minneapolis. In the words of an old concert hall song:

> They soon find their level,
> Then drop like the devil,
> And then they go down, down, down.

The second type of medical politician is the one we are most familiar with in this country and we find him a pleasant contrast to the first. He is rarely an active party politician—in fact he is often classed by old timers as a Mugwump, one who casts his vote for a man or platform or special issue, regardless of the party backing the same. That he rarely seeks or is elected to public office is shown by the fact that our national government can only boast of two senators from our ranks, Drs. L. H. Ball of Delaware and J. H. Gallinger of New Hampshire, and one single representative, Dr. W. G. Hunter of Kentucky. In our state legislature in Illinois, we have one confrere in each house, Dr. J. H. Watson of Woodlawn in the senate and Dr. J. A. Wheeler of Auburn in the lower house. A study of the records of these men brings out the following facts which I wish to impress upon your minds as they bear out some statements of mine which I shall emphasize later. Senator Gallinger and Representative Hunter both graduated in the early fifties and have not been in active practice for many years. Senator Ball, while he only graduated twenty years ago, is practically devoting his whole time to statesmanship. All of these men, with the exception of Hunter of Kentucky live within a comparatively short distance of the National and State capitals respectively. State representative Wheeler lives in Sangamon county and can reach Springfield in a few minutes. Since reading the paper, I have been informed on the best authority that Dr. Wheeler is not practicing medicine at present, and that for several years he has paid more attention to politics than to his profession. State Senator Watson lives further away but I have been told on good authority that he is not an active practitioner.

Our normal every day physician, having established himself in his community and gained the esteem and confidence of his fellow-citizens, is often, though not often enough, willing to devote part of his spare moments to the betterment of his city, county or state. We may call him a specialized medical politician if you please; we find him on boards of health, drainage commissions, school boards, anti-tubercular crusades and—not to omit our latest public achievement, "first aid to the injured societies." Forty-three physicians in Illinois are connected with the U. S. volunteers as surgeons and may be classed as servants of the public as their duties in time of peace pertain largely to military hygiene. Physicians holding office in Europe are common; they are found in municipal councils all over Great Britain; they are mayors, deputies and senators in France, Italy, Germany and Denmark and, as a rule, they are as favorably known medically as they are in the body politic. Dr. Charles A. L. Reed, of Cincinnati, in a letter to the Journal of the A. M. A., dated Sept. 17, 04, states that there are at present in the French senate no less than forty medical men out of a total of three hundred members. He justly exclaims: "Think what might be accomplished in the way of needed and wholesome legislation in the U. S., if our medical profession were only represented in similar proportion in the two branches of Congress."

The third type of physician is rare in Europe and may be said not to exist in this country. The only notable exception to this statement which I have been able to find, is the case of Benjamin Rush who, after obtaining his medical degree, located in Philadelphia in 1768 and for twenty years was one of the leading spirits in the political and social movements of the day. Rush was a member of congress for Pennsylvania in 1776, signed the declaration of independence and some few years later started the first anti-slavery society in America. He was truly a statesman as well as a medical authority. Senator Pozzi in France, whose splendid work on Gynecology we are all familiar with, is an example of the highest type of the medical man, using the term in its broad generic sense. He has been an earnest hard working statesman for years, besides attending to an enormous private and hospital practice in Paris. Premier Combes, who is also a physician, has been successively member of the

General Council, Mayor of Pons, Senator in 1885, 1894 and 1903, vice-president of the senate, Minister of Public Instruction in 1895-1896 and is now Minister of the Interior and Premier. Virchow was constantly guiding public affairs in Germany. As early as 1848, when only 27 years old, he so openly and publicly sympathized with the reforming tendencies of the period, that he was obliged to leave Berlin and retire to Wurtzburg. His titanic work on cellular pathology and his contributions to anthropology,ethnology and archaeology did not prevent him from having an active political career. Returning to Berlin in 1856, he became a member of the Prussian lower house in 1862 and was chairman of the finance committee for many years. In 1880 he entered the Reichstag where he became a leader of the opposition and a vigorous antagonist of Bismark. Not satisfied with his duties as a statesman, Virchow, as member of the Berlin municipal council, took a leading part and was largely responsible for the transformation which came over the city. That it has become one of the healthiest cities in the world from being one of the unhealthiest is attributable in great measure to his insistance on the necessity of sanitary reform, and it was his unceasing efforts that secured for its inhabitants the drainage system sewage farms and good water supply, the benefits of which are reflected in the decreased death rate they now enjoy.

Why is all this so? Why do we as a class hold aloof from executive and legislative offices? That such is the case must be looked upon as a distinct loss to the community. It cannot be that we are busier, more rushed than our confreres in Europe, for we have just shown that the best known and busiest physicians there are precisely the ones who have attained greatest prominence in public life. Are we apathetic in politics? To the same extent that the better element throughout the U. S. is, yes, and yet there are today many physicians especially among the younger members of our profession who would gladly take a more active part in public life, were they reasonably certain that in so doing they would not injure their professional career. We are all of us perfectly willing to take a hand in public hygiene, medical practice acts, food commissions, school boards and like matters of medical interest; we are eager to sign petitions, or send delegates to interview governors or state politicians when a question of vital interest to us as physicians is up for discussion; many of us show splendid executive ability in medical schools, hospitals and societies devoted to medical subjects; the lobbying and wire-pulling which occur at the annual election of state or national societies prove beyond cavil that physicians may be past masters in the arts of diplomacy and intrigue; but when asked to enter the political arena—to become a politician—we shake our heads. It is unfortunate that the social standing of the American politician should be so much below that of his European brother, for in that fact alone I think lies the secret of our apparent lack of desire to enter politics and aid more personally in the battle for a better standard of health, education and morals in our community. It has been stated on good authority that a good doctor can only be a good doctor and nothing else; that the ever increasing studies necessitated by the rapid advancement of the Medical Sciences make it impossible for him to attend to public duties. I need only point to the president of our State Board of Health to show that it is possible for a man to carry on a large and lucrative practice, to be, as Dr. Patrick recently said: "an all round A No. 1 practitioner of medicine and at the same time fill the duties of a health officer in a great state with honor and credit to himself and the community." There are two almost unsurmountable obstacles which prevent us from becoming statesmen while in active practice: The location of our State and National capitals with regard to the great medical centers of the country, and the constitution which requires that a member of a legislative body elected from a certain district or state shall be a *bona-fide* resident of said district or state.

Washington, medically speaking, cannot compare with London, Paris or Berlin, and it would be manifestly impossible for a physician to practice in San Francisco and attend congress at the same time. We may even find it impossible to enter state politics for the same reason. In France or England a physician residing permanently in Paris or London may be elected to office from any part of the country. The proposition put to each one of us is this: How can we do the most good to our community? Is it best for the public as well as for ourselves to remain out of active politics and to strictly attend to the moral, mental and physical welfare of our patients, or can we identify ourselves with local or state governing bodies and still retain our honored position of medical advisor and family friend? No man lives more thoroughly in the public eye than the physician; no man is more carefully dissected, examined and weighed by patients, friends, acquaintances and enemies than you or I, gentlemen, and I firmly believe that the laity today, with few exceptions, would place the stamp of disapproval on any of us who entered politics. The public expects us to do our duty as doctors only, and unless we can restrict our public activities to purely medical matters, we are surely going to lose caste. Must we keep from "doing politics?" This question, in my opinion, should receive a most emphatic negative. While it does not seem wise for us, under present conditions, to run for office, our influence in the community should constantly be brought to bear on our patients and friends whenever, irrespective of party politics, the moral or mental uplifting of our governing bodies can be accomplished. In order to do this honestly and logically, we must perforce belong to the ever increasing ranks of independent voters in local politics, for, so long as we continue to discuss local issues from the standpoint of the "Party," so long will our influence be either nil or useless. Let us then be public workers in a quiet way; let us follow the advice of Dr. Ellis of Los Angeles

who says (Jour. A. M. A. May 7, 1904): "No physician is too busy to drop a word here, a request there, a hint with another patient, a suggestion to a friend, as he goes about his days work; and when that days work is accomplished, and the hints and requests and suggestions are considered, he will realize that much has been done with comparatively little effort.

34 Washington St., Chicago.

Duty of the General Practitioner to the Public As a Physician.

By Dr. J. Allen Patton.

The duties of the general practitioner to the public as a physician are many, the chief ones exercised being those relating to hygienic and preventive medicine.

The duties of a physician to his clientele in aiding them to lead moral and upright lives and to rear their children in those same lines are of as much or more importance than any other obligation his profession calls upon him to assume. Many times an opportunity is offered him in this direction and he does not grasp it.

The parents need instruction in their physical and mental relations with each other; guidance in their physical or physiological relations and responsibilities to their children.

The young adults need instruction in many physical and physiological conditions and the children need daily care and watchful supervision. The physician is the only one who is prepared by his professional training to serve as their instructor and therefore this obligation rightly falls upon him. Many members of the profession fall short of the necessary conception of their duties to their patients in these directions. Most individuals have grown up to adult age without the least instruction from their parents or a physician about some of the most important physiological functions and activities of the human organism.

Teaching should begin with the child for the knowledge of life should grow as the child develops from a helpless to a reasoning being. These developing mental and physical powers are in the hands of the parents and family physician to be moulded and nourished in the way they should grow.

Because of the poor preparation many adults have had for the physical and mental training of children the physician will often be called upon to instruct the parents and to guide or aid them in instructing their children. No other individual can possibly occupy the same position in the family life and to its needs as the trusted family physician, hence he is the foundation stone upon which must be erected a better and stronger moral, mental and physical life.

The parents must be reached first, for through them must normal home life be brought about and only through the parents can normal physiologically developed children be reared in civilized surroundings.

Everyone knows the trust that is placed in the family physician and through him in the specialist that may be consulted, hence in every member of the medical profession when he is giving advice upon matters that deal with the physiological and pathological functions and activities of the body and mind.

Are we as physicians prepared to use our supposed knowledge and our known powers in the ways that will produce the best results in developing natural or normal human beings.

Parents need the physician's advice regarding their sexual life; the effects of the menstrual periods and of pregnancies upon their life together; effects of diseases, mental and physical exhaustion, and many things of the average daily life that furnish topics of thought for the parents and which they often refer to the family physician for his judgment.

Malchow in his book "The Sexual Life" has treated this subject in a way that makes valuable reading for any physician and especially the general practitioner.

Husband and wife are often brought together utterly ignorant of the principles that should govern their relations to each other with respect to their future offspring and all know the marital unhappiness that always results from the unequal sexual mating of man and woman. The family physician must exercise his knowledge of these matters for the sake of the parents and more than all else through the parents for the benefit of their children. Who is better able to judge of the fitness for marriage than the family physician, and he should recognize the unfitness in or before early puberty, should begin his advice to the parents and the child at that time either to correct the physical or mental defect or to aid the parents in rearing the child with a proper understanding of its duties to humanity; that it can best fulfill those duties by not bringing into this life its own kind. Many failures will result but proper, concerted, consistent work in this line by the family physicians will show marked results in a decade or two and more rapidly thereafter.

Who can talk to the mother about her duties to her daughter or to the father of his obligations to his son with more understanding and force than the physician. There is no other individual, no matter what his calling or relation to the parents, that can take up any of these questions as well as the physician, therefore his duties in this direction should be very plain to him. Many parents feel the need of the physician's advice and would gladly avail themselves of it, but because of a faulty training they have a hesitancy about approaching such topics and the physician should seize the opportunity to turn the consultation into such channels that would make it easier for these diffculties and duties of the parents to be considered.

The family physician has a duty to perform during the adolescent period of the children of his clientele that is of more importance for the future well-being and happiness in this life of those children than his careful treatment during any possible form of sickness that may attack them. Many times this duty is not fulfilled by the physician and often it is not even considered by him.

The developments physical, physiological and

mental of the years of puberty are so various and far reaching that each individual requires special study. How many of us received any instruction of value from our parents or family physician and yet most of us have felt the need of it on these matters. Home influences are worth all others in developing proper principles of living and the family physician is an important element in the home life.

Prophylaxis of diseases of all kinds falls to the lot of the physician but in line with right living and especially right sexual living, prophylaxis of venereal diseases is one of the most important for the physician to bear in mind and here is a field that the average physician rarely enters in his family practice.

Physicians have the treatment of the diseased members of their communities as part of their duties but it is much more important for the public to keep healthy persons from becoming diseased than it is to cure the diseased, hence the value of prophylaxis or preventive medicine. Faithful attention to his obligations in these directions by the physician will lead to better physical, mental and moral living.

34 Washington st.

DOUGLAS PARK BRANCH OF THE CHICAGO MEDICAL SOCIETY.

Regular meetings are held on the second Monday evening of each month at Gads Hill Settlement; Roby and 22d St. Membership —.

Officers.

President.....J. Chase Stubbs, 971 W. 22d st
Vice-President.....J. F. Chvatal, 1593 W. 22d st
Secretary.....Clyde D. Pence, 1389 Ogden ave
Treasurer.....Wm. E. Miller, 1155 S. California ave
Councillor.....J. A. Clark, 832 W. 21st st

The Douglas Park Branch of the Chicago Medical Society held an informal reception, October 10th at Gads Hill Settlement Hall, and invited the wives of the members to be present.

The features of the evening were readings given by the Misses Moss and Abell; vocal selection rendered by Miss Hardie, Dr. Beebe and Dr. Hardie. Cornet solo, Mrs. Conlon; piano selection, Mrs. Pence. Luncheon was served by Mrs. Martin of Gads Hill and a most enjoyable evening was spent.

"Why do we not have more of these social evenings" was asked by so many present that there is no doubt of the popularity of these informal evenings.

SOUTH WESTERN SECTION OF THE CHICAGO MEDICAL SOCIETY.

Regular meetings are held monthly at 540 W. 63d st. Membership 70.

Officers.

President.....F. L. Rose, 5420 S. Halsted st
Vice President.....Wier
Secretary-Treasurer..C. H. Lovewell, 5500 S. Halsted st.
Official Reporter, T. C. McGonagle..5504 S. Halsted

At the October meeting of the Southwestern Section of the Chicago Medical Society, Tuesday evening, October 4, a very earnest and interesting paper was read by Prof. Watkins, covering the subject of **gonorrhoea in the female.** Prof. Schmidt also read an instructive and interesting paper on the subject of **gonorrhoea in the male.** There was an attendance of 36 members, and all felt that this was one of the best meetings we have had. The November meeting is to be a clinical meeting and members are requested to bring cases of interest.

MANAGEMENT OF HOSPITAL FOR INSANE IS CENSURED.

Testimony at Inquest Shows That Attendants at Bartonville Institution Are Incompetent.

Gross negligence and incompetency on the part of attendants of the Bartonville hospital for the incurable insane was the verdict of the coroner's jury in the inquest on the body of Fred Weber held October 14th.

Weber was an imbecile inmate of the institution who, it is declared, was scalded to death in a bathtub a few days ago. The testimony developed that two of the attendants had just come from farms and had secured their jobs through political influence. Neither had the slightest hospital or asylum training. One had been at the asylum three weeks and the other less than two.

Weber was a crying patient, and while bathing cried and moaned, symptoms which the attendants did not understand. The attendants say the water in which Weber bathed was lukewarm, and Dr. Burnham of the asylum, who says death was the result of senile gangrene, testified that the water was milk warm. Dr. Zeller insists the man was scalded to death.

The coroner's jury charged the management of the asylum with gross carelessness and neglect, and condemned it for placing in such responsible positions men with so little experience.

Edward Deans, a patient and attendant, and Fred G. Weller, who administered the baths, are mentioned in the verdict, but no recommendation as to prosecutions is made.

DR. PETTEY'S RETREAT
FOR THE TREATMENT OF
ALCOHOL AND DRUG ADDICTIONS.
958 DAVIE AVENUE, MEMPHIS, TENN. 1939 EAST EVANS AVE., DENVER, COLO.
Methods employed render these addictions the most certainly and readily curable of all the chronic ailments. For particulars address the Retreat most convenient to you.